memmert
Experts in Thermostatics

Heating and drying ovens

COMMUNICATION. COMFORT. SIMPLY GREAT.

UNIVERSAL OVEN U

PASS-THROUGH OVEN UF TS

PARAFFIN OVEN UNpa

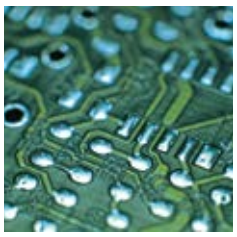
STERILISER S

VACUUM OVEN VO

COOLED VACUUM OVEN VOcool

100% ATMOSAFE. MADE IN GERMANY.

www.memmert.com | www.atmosafe.net



Simply boundless. Boundlessly simple.

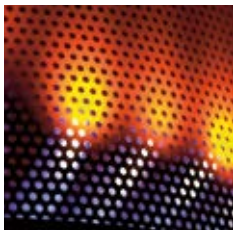
Drying, heating, ageing, testing, sterilising, burning-in, curing, storing. 100% AtmoSAFE.

From very small to very large! 32 litres or 1060 litres chamber volume? Standard applications or high demand for functionality, programming and documentation? In any case, all Memmert heating and drying ovens feature user-friendliness and state-of-the-art communication interfaces as a basic. Each individual appliance complies with the strict requirements of DIN 12880:2007-05 and is equipped with a maximum of safety functions. Each individual Memmert heating and drying oven is 100% AtmoSAFE.

Universal Oven UN/UNm and UF/UFm with SingleDISPLAY
Universal Oven UNplus/UNmplus and UFplus/UFmplus with TwinDISPLAY
Natural convection or forced ventilation
AtmoCONTROL software

Model sizes:
30 / 55 / 75 / 110 / 160 / 260 / 450 / 750 / 1060
+30 °C up to +300 °C

UNIVERSAL OVEN U The all-round genius among the heating ovens covers a multitude of applications, ideally at temperatures above +50 °C. Without compromises! Thanks to two model variants and nine sizes, optionally with natural or forced convection, industry, science and research institutes will find a heating and drying oven which combines top precision and safety with optimal operating comfort.



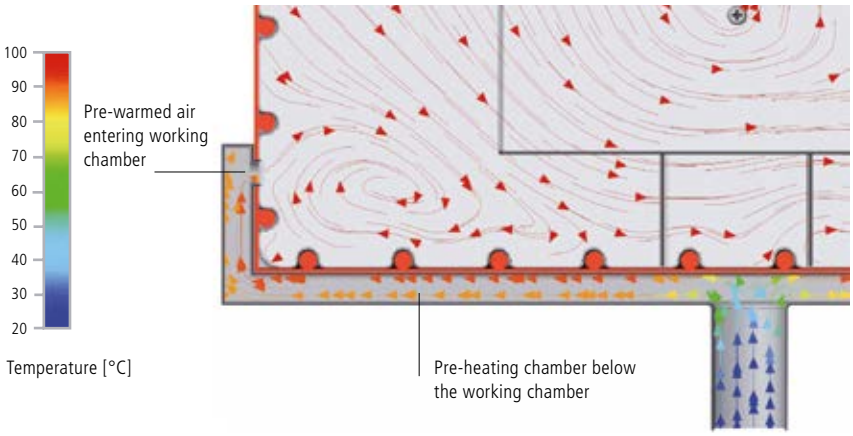
Defined and programme-controlled fan speed

Air exchange rates and air flap position can be controlled electronically at the ControlCOCKPIT. More inlet and outlet openings lead to a higher air exchange and reduced drying times. Various applications recommend or even require controlled ventilation. When drying powder, sand or corn, reducing the ventilation prevents undesired swirls.

Other applications like testing of wires or cables demand for defined air exchange rates. UFplus/UFmplus appliances feature easy programming of temperature and air exchange rates with the AtmoCONTROL software.

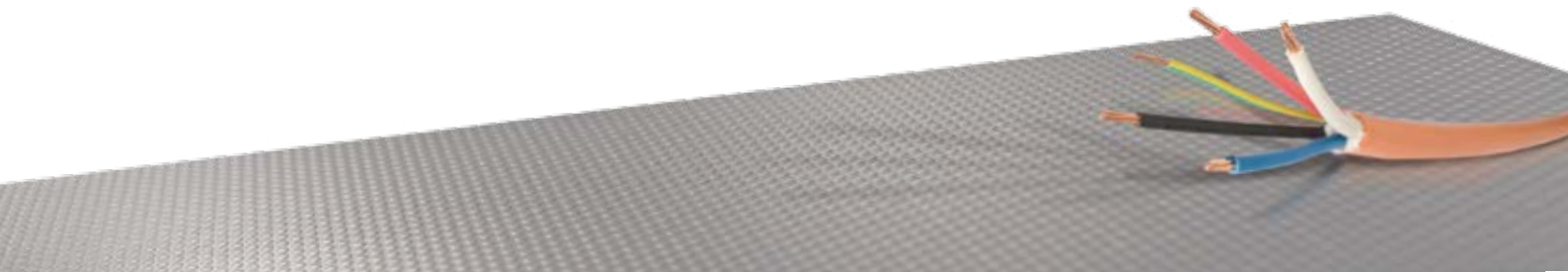
Fresh air is preheated

Temperature deviations caused by fresh air can influence sample characteristics or prolong drying. In Memmert universal ovens, the fresh air is therefore fed through a pre-heating chamber and introduced into the working chamber.



The universal oven Um is a medical device:

Memmert universal ovens Um are a Class I medical device in accordance with the EU directive 93/42/EEC. In accordance with the intended use Memmert heating ovens UFm (with extended overtemperature protection – option A6) or UFmplus may be used for heating of non-sterile cloths and blankets, Memmert heating oven UNm (with option A6) or UNmplus for heating fango, silicate and APS packs for physical therapy and keeping them warm.



UNIVERSAL OVENS U

according to DIN 12880:2007-05, EN 61010-1 (IEC 61010-1), 61010-2-010

Standard units are safety-approved and bear the test marks:
(EAC not valid for medical devices cUL not valid for size 1060)

Standard equipment

Interior: Stainless steel, material 1.4301 (ASTM 304), with all-round deep-drawn ribs to integrate the large-area heating with ceramic-metal sheath

Internals: Stainless steel grids, electropolished (sizes 30, 55 and 1060: 1 grid, sizes 75 – 750: 2 grids)

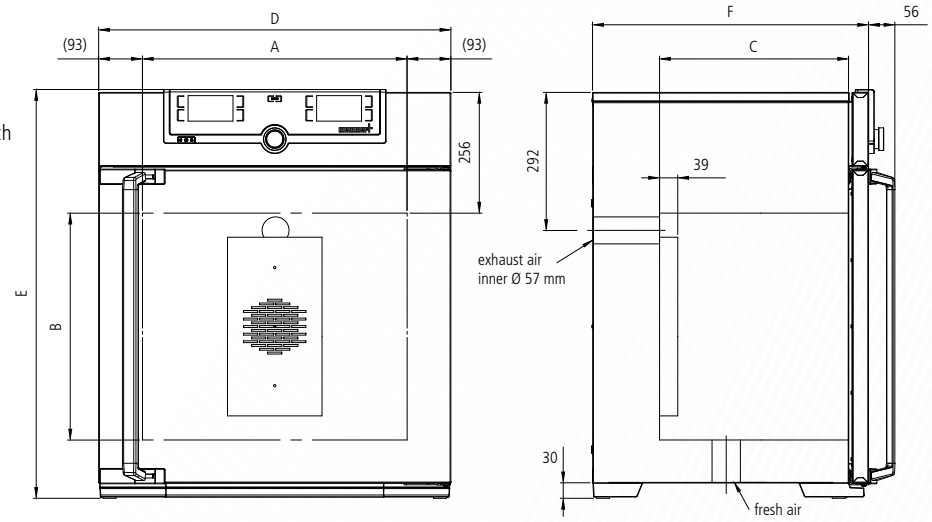
Housing: Textured stainless steel, rear zinc-plated steel, intuitively operated SingleDISPLAY or TwinDISPLAY (TFT colour display) with touchscreen (from size 450 two leaves)

Fresh air: Admixture of pre-heated fresh air by electronically adjustable air flap

Connection: Mains cable with plug (German type) CEE plug for 400 V

Installation: 4 feet; sizes 450, 750 and 1060 mounted on lockable castors

Interfaces: Ethernet LAN, USB (only TwinDISPLAY)



Model sizes/Description			30	55	75	110	160	260	450	750	1060
Stainless steel interior	Volume	approx. l	32	53	74	108	161	256	449	749	1060
	Width (A)	mm	400	400	400	560	560	640	1040	1040	1040
	Height (B)	mm	320	400	560	480	720	800	720	1200	1200
	Depth (less 39 mm for fan) (C)	mm	250	330	330	400	400	500	600	600	850
	Stainless steel grids, electropolished (standard equipment)	number	1		2						1
	Max. number of grids/shelves	number	3	4	6	5	8	9	8	14	
	Max. loading per grid/shelf	kg	20						30		60
	Max. loading of chamber	kg	60	80	120	175	210	300			
Textured stainless steel exterior	Width (D)	mm	585	585	585	745	745	824	1224	1224	1224
	Height (size 450, 750, 1060 with castors) (E)	mm	704	784	944	864	1104	1183	1247	1726	1726
	Depth (without door handle), door handle + 56 mm (F)	mm	434	514	514	584	584	684	784	784	1035
Further data	Electrical load at 230 V, 50/60 Hz	approx. W	1600	2000	2500	2800	3200	3400	–		
	Electrical load at 115 V, 50/60 Hz	approx. W	1600	1700	1800				–		
	Electrical load at 400 V and 3 x 230 V w/o neutral, 50/60 Hz	approx. W	–						5800	7000	
	Working-temperature range	°C	at least 5 (UN/UNplus/UNm/UNmplus) at least 10 (UF/UFplus/UFm/UFmplus) above ambient temperature to +300								
	Setting temperature range	°C	+20 to +300								
	Setting accuracy	°C	up to 99.9: 0.1 / from 100: 0.5								
Packing data	Net weight	approx. kg	45	57	66	74	96	110	161	217	252
	Gross weight (packed in carton)	approx. kg	61	76	85	99	122	161	227	288	416
	Width	approx. cm	66	73	73	83	83	93	133	133	137
	Height	approx. cm	89	95	113	105	130	138	144	191	197
	Depth	approx. cm	65	67	67	80	80	93	105	105	130

Order No. Universal Ovens
U = Universal Oven
N = Natural convection
F = Forced air circulation
m = Medical device
plus = Model with TwinDISPLAY

30	55	75	110	160	260	450	750	1060
UN30 UN30m	UN55 UN55m	UN75 UN75m	UN110 UN110m	UN160 UN160m	UN260 UN260m	UN450 UN450m	UN750 UN750m	–
UN30plus UN30mplus	UN55plus UN55mplus	UN75plus UN75mplus	UN110plus UN110mplus	UN160plus UN160mplus	UN260plus UN260mplus	UN450plus UN450mplus	UN750plus UN750mplus	–
UF30 UF30m	UF55 UF55m	UF75 UF75m	UF110 UF110m	UF160 UF160m	UF260 UF260m	UF450 UF450m	UF750 UF750m	UF1060 UF1060m
UF30plus UF30mplus	UF55plus UF55mplus	UF75plus UF75mplus	UF110plus UF110mplus	UF160plus UF160mplus	UF260plus UF260mplus	UF450plus UF450mplus	UF750plus UF750mplus	UF1060plus UF1060mplus

Options	30	55	75	110	160	260	450	750	1060
Voltage 115 V, 50/60 Hz	X2						–		
Extended overtemperature protection by additionally integrated Pt100 sensor for independent temperature monitoring for models UN/UF/UNm/UFm	A6								
Full-sight glass door (4-layer insulating glass) – temperature-range up to max. 250 °C	B0								
Full-sight glass door (4-layer insulating glass borsilicat) Temperature-range up to max. 300 °C	B1								
Chamber modification for the application of reinforced perforated stainless steel shelves or stainless steel grids (bearing rails mounted in the working chamber) – includes replacement of 2 standard grids by 2 reinforced grids	–						K1		–
Fresh-air filter (filtration efficiency 80 %) mounted at the bottom (for UF/UFplus/UFm/UFmplus). For sizes 30 – 260 castor frame or subframe necessary – see page 28	R8								
Interior lighting for observing the load	R0								
Interior socket (can only be ordered with limited temperature-range – max. +70 °C) current carrying ampacity 230 V, 2.2 A can be switched off with the On/Off switch, cannot be switched individually (option A8 necessary – see page 28)	R3								
Interior nearly gastight	K2								
Ditto, with possibility for gas inlet/outlet through 2 tubes with ball valves	K3								
Entry port, 23 mm clear diameter, for introducing connections at the side, can be closed by flap, standard positions left centre/centre	F0								
left centre top	F1								
right centre/centre	F2								
right centre top	F3								
Entry port, 23 mm clear diameter, for introducing connections, can be closed by flap in special positions (please, state location) left	F4								
right	F5								
rear	F6								
Entry port, 14 mm clear diameter, can be closed by flap, in special positions at the back (please, state location)	D6								
Entry port, 38 mm clear diameter, can be closed by flap, in special positions at the back (please, state location)	F7								
Entry port, 57 mm clear diameter, can be closed by flap, in special positions at the back (please, state location)	F8								
Entry port, 100 mm clear diameter, can be closed by flap, in special positions at the back (please, state location)	–		F9						
4 – 20 mA current loop interface (0 to +310 °C ≙ 4 – 20 mA) Temperature controller actual value	V3								
Temperature of a Pt100 sensor positioned flexibly in chamber for external temperature monitoring (max. 1 SingleDISPLAY, max. 3 TwinDISPLAY)	V6								
Fan speed monitoring with switching off the heating and with alarm in case of failure – optional for UFplus/UFmplus only	V4								
Works calibration certificate for 3 temperatures: +100 °C, +160 °C, +220 °C Standard works calibration certificate (measuring point chamber centre) at +160 °C	D00128								

Accessories	30	55	75	110	160	260	450	750	1060
Stainless steel grid, electropolished (standard equipment)	E28884	E20164		E20165		E28891	E20182		B32550
Additional reinforced stainless steel grid, electropolished, max. loading 60 kg; from size 450 with guide bars and fixing screws (only in connection with option K1). Please consider max. loading of chamber	–			E29767		E29766	B32190		–
Perforated stainless steel shelf	B29727	B03916		B00325		B29725	B00328		B32549
Additional reinforced stainless steel shelf, max. loading 60 kg; with guide bars and fixing screws (only in connection with option K1). Please consider max. loading of chamber	–						B32191		–
Stainless steel slide-in drip tray, 15 mm rim (may affect the temperature distribution) – cannot be used in connection with option K1	E02070	E02072		E02073		E29726	E02075		B32599
Max. loading per slide-in drip tray (kg)	1.5			3		4	8		
Stainless steel slide-in drip tray, 15 mm rim, with guide bars and fixing screws (can be used only in connection with option K1)	–						B32763		–
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution) – cannot be used in connection with option K1	B04356	B04358		B04359		B29722	B04362		B29769
Max. loading per bottom drip tray (kg)	1.5			3		4	8		
Stainless steel bottom drip tray, 15 mm rim (can be used only in connection with option K1)	–						B34055		–
Wall bracket for wall mounting	B29755	B29756	B29757	B29758	B29759		–		
Guarantee extension by 1 year	GA1Q5						GA2Q5		

Further options/accessories see pages 28 - 30.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

Pass-through oven UF TS
TwinDISPLAY
Forced convection
AtmoCONTROL standard software

Model sizes:
160 / 260 / 450 / 750
+30 °C to +250 °C

PASS-THROUGH OVEN UF TS Pass-through ovens UF TS are based on a standard heating oven and feature all technological highlights like product specific heating and perfectly adjusted control technology. Thanks to an additional side feed-through, curing of lead frames and adhesive bonds or tempering of components can be controlled automatically within a running production process.

High feed-through thanks to in-line capability

Temperature control processes in a Memmert pass-through oven can be controlled fully electronically. The synchronised loading of parts is done by means of belt input and output at the side. To increase the feed-through for endless loading, turn pulleys can be installed in the chamber on request. Windows at the front and rear enable simple loading by hand, and also allow the temperature control process to be permanently observed. Another advantage not to be missed out: constant temperatures inside the temperature-control chamber as it does not have to be opened for loading.

In-line capable pass-through oven (belt input and output at the side)

Customer-specific solutions myAtmoSAFE

In the position of an expansion of the R&D departments of customers, the customisation department at Memmert provides support for complex applications and finds tailor-made solutions. Many customers are supported from development to production.

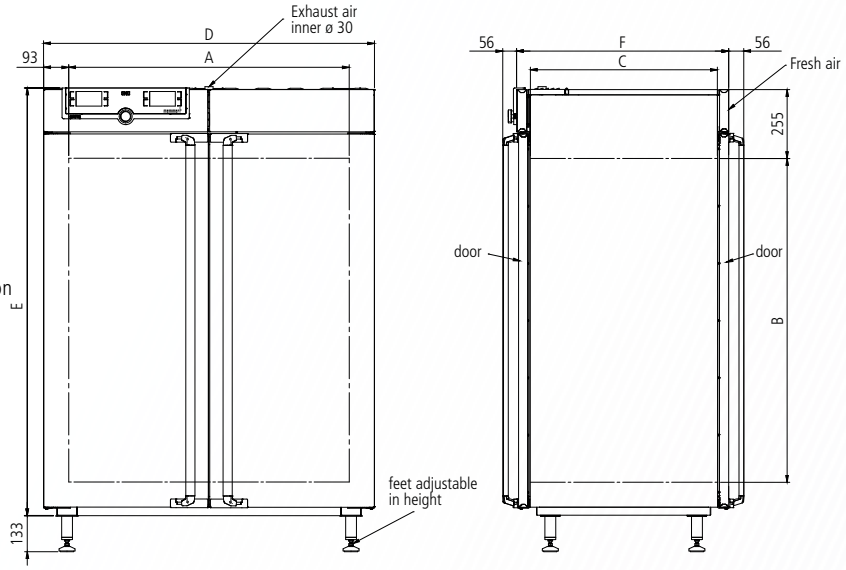
PASS-THROUGH OVENS UF TS

according to DIN 12880:2007-05

CE

Standard equipment

Interior:	Stainless steel, mat. 1.4301 (ASTM 304), with all-round deep-drawn ribs to integrate the large-area heating with ceramic-metal sheath
Internals:	2 stainless steel grids, electropolished
Housing:	Textured stainless steel, intuitively operated TwinDISPLAY (TFT colour displays) with touchscreen, fully insulated stainless steel door on both sides (from model size 450 two leaves), pass-through version
Fresh air:	Admixture of pre-heated fresh air by electronically adjustable air flap
Connection:	Mains cable with plug (German type) (CEE plug for 400 V)
Installation:	4 feet
Interfaces:	Ethernet LAN, USB



Model sizes/Description				160	260	450	750
Stainless steel interior	Volume		approx. l	161	256	449	749
	Width	(A)	mm	560	640	1040	1040
	Height	(B)	mm	720	800	720	1200
	Depth	(C)	mm	400	500	600	600
	Stainless steel grids, electropolished (standard equipment)		number	2			
	Max. number of grids/shelves		number	8	9	8	14
	Max. loading per grid/shelf		kg	20		30	
	Max. loading of chamber		kg	210		300	
Textured stainless steel exterior	Width	(D)	mm	745	825	1224	1224
	Height	(E)	mm	1233	1314	1233	1714
	Depth (without door handle, depth of handle 2 x 56 mm)	(F)	mm	582	682	782	782
Further data	Electrical load at 230 V, 50/60 Hz		approx. W	3200	3400	–	
	Electrical load at 115 V, 50/60 Hz		approx. W	1800		–	
	Electrical load at 400 V and 3 x 230 V w/o neutral, 50/60 Hz		approx. W	–		5800	7000
	Working-temperature range		°C	at least 10 above ambient temperature to +250			
	Setting temperature range		°C	+20 to +250			
	Setting accuracy		°C	up to 99.9: 0.1 / from 100: 0.5			
Packing data	Net weight		approx. kg	120	138	213	260
	Gross weight (packed in carton)		approx. kg	146	189	279	331
	Width		approx. cm	83	93	133	133
	Height		approx. cm	130	138	145	192
	Depth		approx. cm	80	93	105	105
Order No. Pass-Through Ovens				**UF160TS**	**UF260TS**	**UF450TS**	**UF750TS**

Optionen	160	260	450	750
Voltage 115 V, 50/60 Hz	X2		–	
Full-sight glass door (4-layer insulating glass) – per side – temperature-range up to max. 250 °C	B0			
Chamber modification for the application of reinforced perforated stainless steel shelves or stainless steel grids (bearing rails mounted in the working chamber) – includes replacement of 2 standard grids by 2 reinforced grids	K1			
Entry port, 23 mm clear diameter, for introducing connections at the side, can be closed by flap, standard positions left centre/centre left centre top right centre/centre right centre top	F0 F1 F2 F3			
Entry port, 23 mm clear diameter for introducing connections at the side, can be closed by flap, in special positions (please, state location) left right	F4 F5			
Process-dependent electromagnetic door lock (both sides)	D4			
Locking mechanism to prevent simultaneous opening of doors for contamination protection in case of wall installation	D5			
4 – 20 mA current loop interface (0 to +260 °C ≙ 4 – 20 mA) Temperature controller actual value Temperature of a Pt100 sensor positioned flexibly in chamber for external temperature monitoring (max. 1 SingleDISPLAY, max. 3 TwinDISPLAY) – price per sensor	V3 V6			
Fan speed monitoring with switching off the heating and with alarm in case of failure	V4			
Works calibration certificate for 3 temperatures: +100 °C, +160 °C, +220 °C Standard works calibration certificate (measuring point chamber centre) at +160 °C	D00128			

Accessories	160	260	450	750
Stainless steel grid, electropolished (standard equipment)	E20165	E28891	E20182	
Additional reinforced stainless steel grid, electropolished, max. loading 60 kg; with guide bars and fixing screws (only in connection with option K1). Please consider max. loading of chamber	–		B32190	
Perforated stainless steel shelf	B00325	B29725	B00328	
Additional reinforced perforated stainless steel shelf, max. loading 60 kg; with guide bars and fixing screws (only in connection with option K1). Please consider max. loading of chamber	–		B32191	
Stainless steel slide-in drip tray, 15 mm rim (may affect the temperature distribution) – cannot be used in connection with option K1	E02073	E29726	E02075	
Max. loading per slide-in drip tray (kg)	3	4	8	
Stainless steel slide-in drip tray, 15 mm rim, with guide bars and fixing screws (can be used only in connection with option K1)	–		B32763	
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution) – cannot be used in connection with option K1	B04359	B29722	B04362	
Max. loading per bottom drip tray (kg)	3	4	8	
Stainless steel bottom drip tray, 15 mm rim (can be used only in connection with option K1)	–		B34055	
Flush-fit unit set (stainless steel frame covering gap between oven and wall opening), without air slots – technical clarification required	B33204	B33205	B33206	B33207
Guarantee extension by 1 year	GA1Q5		GA2Q5	

Further options/accessories see pages 28 - 30.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

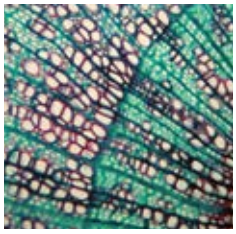
Paraffin oven UNpa with TwinDISPLAY
AtmoCONTROL software

Model sizes:
30 / 55 / 75 / 110 / 160
+30 °C to +80 °C

PARAFFIN OVEN UNpa Five model sizes, five times high-precision temperature control of the embedding medium paraffin in science and research. The range of functions and thermal safety of paraffin ovens UNpa are designed specifically for absolutely reliable sample preparation in the laboratory. The benefits for the user: an optimal cost/benefit ratio for an appliance that guarantees, for many years, precise and even temperature control for embedding media without any loss in quality whatsoever.

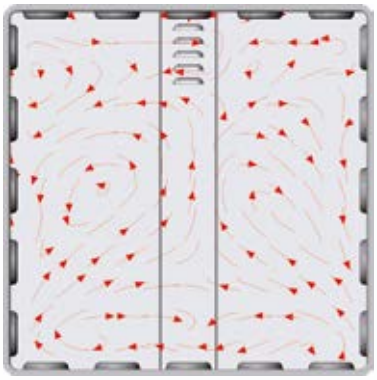
Safe warming of paraffin

Thanks to its high capillarity, liquid paraffin is an ideal embedding medium. This property, however, may lead to oily residue in tiny cavities. For this reason, the interior chamber of paraffin ovens UNpa is designed almost gas tight. There is definitely no danger of ignition of residue or damage to mechanical and electronic components.



Absolutely uniform temperature distribution

Due to the almost gas tight chamber, no outside air is exchanged. Therefore, the advantages of the uniform temperature distribution by the large surface all-round heating system applied in Memmert heating ovens come fully into play. Also without forced convection, the perfect interaction of the control system and heating unit ensures unparalleled temperature homogeneity and stability.



Air flow with
natural convection

PARAFFIN OVENS UNpa

according to DIN 12880:2007-05, EN 61010-1 (IEC 61010-1), 61010-2-010

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

Standard equipment

Interior: Stainless steel, material 1.4301 (ASTM 304), with all-round deep-drawn ribs to integrate the large-area heating with ceramic-metal sheath

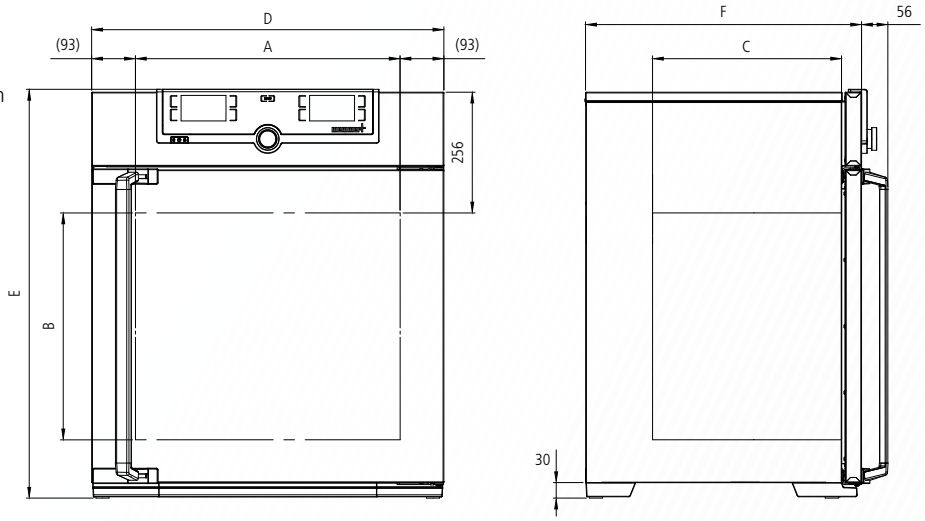
Internals: Stainless steel grids, electropolished (sizes 30 and 55: 1 grid, sizes 75 – 160: 2 grids)

Housing: Textured stainless steel, rear zinc-plated steel, intuitively operated TwinDISPLAY (TFT colour display) with touchscreen, fully insulated stainless steel door

Connection: Mains cable with plug (German type)

Installation: 4 feet

Interfaces: Ethernet LAN, USB



Model sizes/Description				30	55	75	110	160
Stainless steel interior	Volume		approx. l	32	53	74	108	161
	Width	(A)	mm	400	400	400	560	560
	Height	(B)	mm	320	400	560	480	720
	Depth	(C)	mm	250	330	330	400	400
	Stainless steel grids, electropolished (standard equipment)		number	1			2	
	Max. number of grids/shelves		number	3	4	6	5	8
	Max. loading per grid/shelf		kg	20				
	Max. loading of chamber		kg	60	80	120	175	210
Textured stainless steel exterior	Width	(D)	mm	585	585	585	745	745
	Height	(E)	mm	704	784	944	864	1104
	Depth (without door handle), door handle + 56 mm	(F)	mm	434	514	514	584	584
Further data	Electrical load at 230 V, 50/60 Hz		approx. W	1600	2000	2500	2800	3200
	Electrical load at 115 V, 50/60 Hz		approx. W	1600	1700	1800		
	Working-temperature range		°C	at least 5 above ambient temperature to +80				
	Setting temperature range		°C	+20 to +80				
	Setting accuracy		°C	0.1				
Packing data	Net weight		approx. kg	45	55	66	75	96
	Gross weight (packed in carton)		approx. kg	61	74	85	100	122
	Width		approx. cm	66	73	73	83	83
	Height		approx. cm	89	95	113	105	130
	Depth		approx. cm	65	67	67	80	80
Order No. Paraffin Ovens				**UN30pa**	**UN55pa**	**UN75pa**	**UN110pa**	**UN160pa**

Options	30	55	75	110	160
Voltage 115 V, 50/60 Hz			X2		
Full-sight glass door (4-layer insulating glass)			B0		
Entry port, 23 mm clear diameter, for introducing connections at the side, gas tight, can be closed by flap and silicone stopper, standard positions					
left centre/centre			F0		
left centre top			F1		
right centre/centre			F2		
right centre top			F3		
Entry port, 23 mm clear diameter, for introducing connections, gas tight, can be closed by flap and silicone stopper, in special positions (please, state location)					
left			F4		
right			F5		
rear			F6		
Entry port, 40 mm clear diameter, for introducing connections, gas tight, can be closed by flap and silicone stopper, in special positions at the back (please, state location)			F7		
4 – 20 mA current loop interface (0 to +90 °C ≙ 4 – 20 mA)					
Temperature controller actual value			V3		
Temperature of a Pt100 sensor positioned flexibly in chamber for external temperature monitoring (max. 3 TwinDISPLAY)			V6		
Gas inlet and outlet through 2 tubes with ball valves			K3		
Works calibration certificate for 3 temperatures: +37 °C, +52 °C, +70 °C					
Standard works calibration certificate (measuring point chamber centre) at +80 °C			D00126		

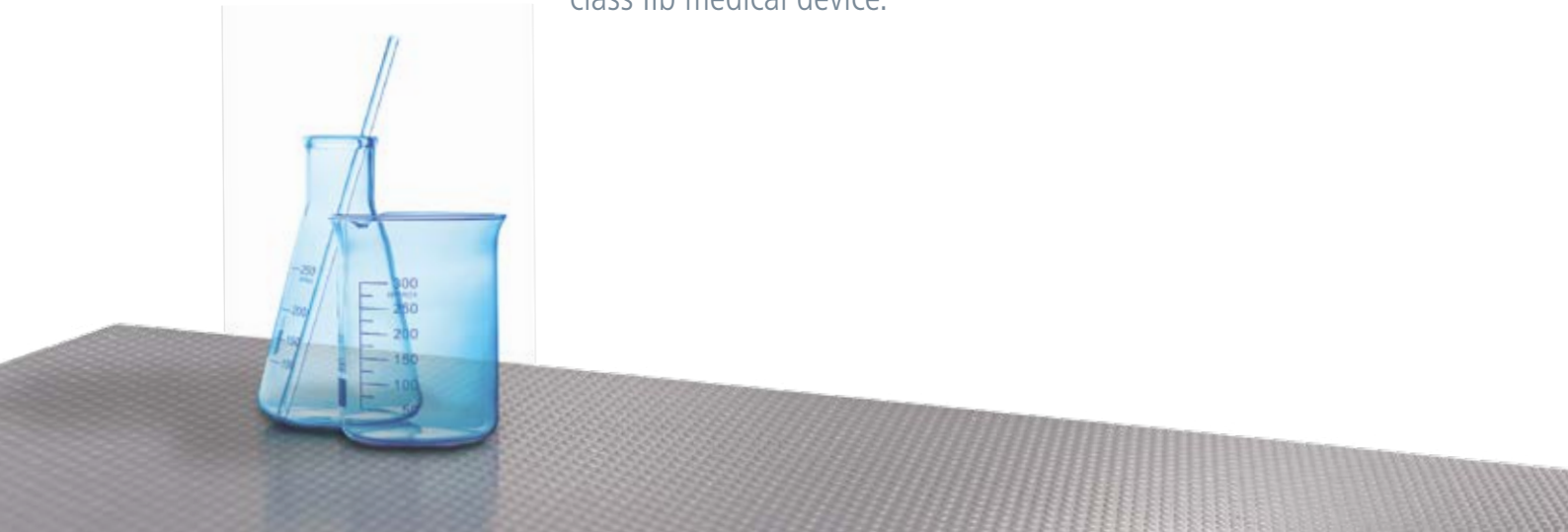
Accessories	30	55	75	110	160
Stainless steel grid, electropolished (standard equipment)	E28884	E20164		E20165	
Perforated stainless steel shelf	B29727	B03916		B00325	
Stainless steel slide-in drip tray, 15 mm rim (may affect the temperature distribution)	E02070	E02072		E02073	
Max. loading per slide-in drip tray (kg)	1.5			3	
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution)	B04356	B04358		B04359	
Max. loading per bottom drip tray (kg)	1.5			3	
Wall bracket for wall mounting	B29755	B29756	B29757	B29758	B29759
Guarantee extension by 1 year			GA1Q5		

Further options/accessories see pages 28 - 30.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

Steriliser SN and SF with SingleDISPLAY
Steriliser SNplus and SFplus with TwinDISPLAY
Natural convection or forced ventilation
AtmoCONTROL software

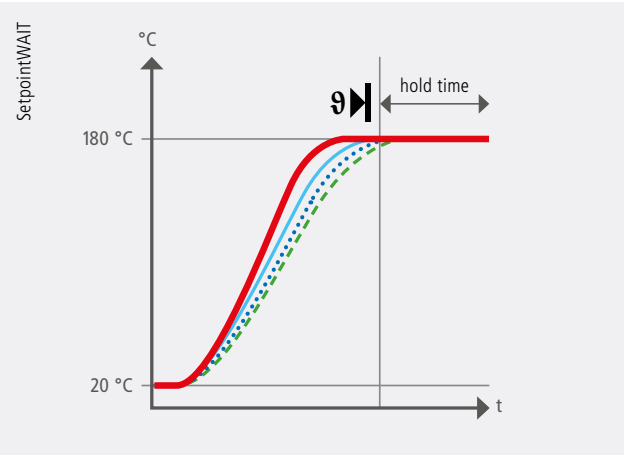
Model sizes:
30 / 55 / 75 / 110 / 160 / 260 / 450 / 750
+30 °C to +250 °C

STERILISER S Medicine has the goal of protecting and saving lives. Therefore, disinfection of receptacles and instruments is not enough. The setpoint-dependent programme resume function SetpointWAIT of Memmert hot air sterilisers guarantees precise sterilisation times and the complete killing off of even the most resistant microorganisms. All Memmert sterilisers are classified as class IIb medical device.



SetpointWAIT function

Exactly timed temperature control helps to save lives when it comes to sterilisation of instruments and laboratory equipment. Therefore, the SetpointWAIT function guarantees that the sterilisation time does not start before the compensation time is reached. When measuring with additional freely positionable Pt100 sensors (optional), reaching the set temperature at all measuring points on the chamber load is decisive for the continuation of the programme. Up to three measurements can be displayed directly on the ControlCOCKPIT or one measurement on an external measuring device or a 4 – 20 mA interface.



When the SetpointWAIT function is activated, the hold time does not start until the temperature within a very narrow tolerance range is reached at all measuring points

Temperature of the Pt100 sensor inside the chamber

Temperature of the flexible Pt100 sensors inside the chamber

Validation without problems

Particularly thanks to the SetpointWAIT function, Memmert hot air sterilisers comply with all strict requirements on quality assurance and can therefore be validated without problems. Besides the possibility to measure the temperature directly at the load inside the chamber (optional), the appliances completely document the entire process. In combination with the User-ID-Key for TwinDISPLAY appliances, the process-controlled door locking mechanism (optional) is the icing on the cake in terms of safety.

The steriliser SN/SF/SNplus/SFplus is a medical device:

All Memmert sterilisers are classified as class IIb medical device. The appliances may be used for sterilising medical material through dry heat at atmospheric pressure. They are also suited without restriction for the special application of depyrogenisation with hot air.

STERILISERS S

according to DIN 12880:2007-05, EN 61010-1 (IEC 61010-1), 61010-2-010 and 61010-2-40

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

Standard equipment

Interior: Stainless steel, material 1.4301 (ASTM 304), with all-round deep-drawn ribs to integrate the large-area heating with ceramic-metal sheath

Internals: Stainless steel grids, electropolished (sizes 30 and 55: 1 grid, sizes 75 – 750: 2 grids)

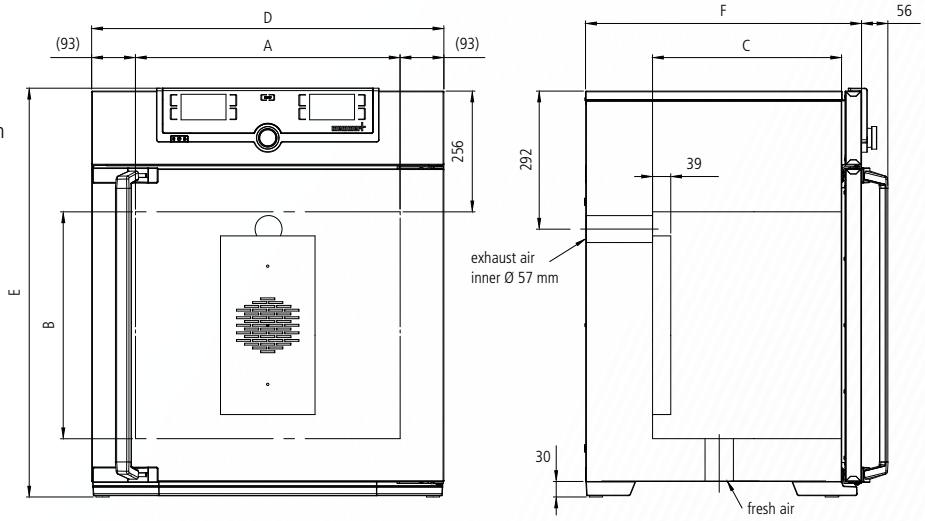
Housing: Textured stainless steel, rear zinc-plated steel, intuitively operated SingleDISPLAY or TwinDISPLAY (TFT colour display) with touchscreen (from size 450 two leaves)

Fresh air: Admixture of pre-heated fresh air by electronically adjustable air flap

Connection: Mains cable with plug (German type) CEE plug for 400 V

Installation: 4 feet; sizes 450 and 750 mounted on lockable castors

Interfaces: Ethernet LAN, USB (only TwinDISPLAY)



Model sizes/Description				30	55	75	110	160	260	450	750
Stainless steel interior	Volume		approx. l	32	53	74	108	161	256	449	749
	Width	(A)	mm	400	400	400	560	560	640	1040	1040
	Height	(B)	mm	320	400	560	480	720	800	720	1200
	Depth (less max. 39 mm for fan)	(C)	mm	250	330	330	400	400	500	600	600
	Stainless steel grids, electropolished (standard equipment)		number	1		2					
	Max. number of grids/shelves		number	3	4	6	5	8	9	8	14
	Max. loading per grid/shelf		kg	20						30	
	Max. loading of chamber		kg	60	80	120	175	210	300		
Textured stainless steel exterior	Width	(D)	mm	585	585	585	745	745	824	1224	1224
	Height (size 450, 750 with castors)	(E)	mm	704	784	944	864	1104	1183	1247	1726
	Depth (without door handle), door handle + 56 mm	(F)	mm	434	514	514	584	584	684	784	784
Further data	Electrical load at 230 V , 50/60 Hz		approx. W	1600	2000	2500	2800	3200	3400	–	
	Electrical load at 115 V, 50/60 Hz		approx. W	1600	1700	1800				–	
	Electrical load at 400 V and 3 x 230 V w/o neutral, 50/60 Hz		approx. W	–						5800	7000
	Working-temperature range		°C	at least 5 (SN/SNplus) 10 (SF/SFplus) above ambient temperature to +250							
	Setting temperature range		°C	+20 to +250							
	Setting accuracy		°C	up to 99.9: 0.1 / from 100: 0.5							
Packing data	Net weight		approx. kg	46	57	66	74	96	110	161	217
	Gross weight (packed in carton)		approx. kg	62	76	85	99	122	161	227	288
	Width		approx. cm	66	73	73	83	83	93	133	133
	Height		approx. cm	89	95	113	105	130	138	144	191
	Depth		approx. cm	65	67	67	80	80	93	105	105

Order No. Sterilisers

S = Steriliser
N = Natural convection
F = Forced air circulation
plus = Model with TwinDISPLAY

SN30	SN55	SN75	SN110	SN160	SN260	SN450	SN750
SN30plus	SN55plus	SN75plus	SN110plus	SN160plus	SN260plus	SN450plus	SN750plus
SF30	SF55	SF75	SF110	SF160	SF260	SF450	SF750
SF30plus	SF55plus	SF75plus	SF110plus	SF160plus	SF260plus	SF450plus	SF750plus

Options	30	55	75	110	160	260	450	750
Voltage 115 V, 50/60 Hz	X2						–	
Extended overtemperature protection by additionally integrated Pt100 sensor for independent temperature monitoring for models SN/SF	A6							
Full-sight glass door (4-layer insulating glass)	B0							
Interior lighting for observing the load	R0							
Chamber modification for the application of reinforced perforated stainless steel shelves or stainless steel grids (bearing rails mounted in the working chamber) – includes replacement of 2 standard grids by 2 reinforced grids	–						K1	
Fresh-air filter (filtration efficiency 80 %) mounted at the appliance bottom (for SF/SFplus). For sizes 30 – 260 castor frame or subframe necessary – see page 28	R8							
Entry port, 23 mm clear diameter, for introducing connections at the side, can be closed by flap, standard positions left centre/centre	F0							
left centre top	F1							
right centre/centre	F2							
right centre top	F3							
Entry port, 23 mm clear diameter, for introducing connections, can be closed by flap in special positions (please, state location) left	F4							
right	F5							
rear	F6							
Entry port, 14 mm clear diameter, can be closed by flap, in special positions at the back (please, state location)	D6							
Entry port, 38 mm clear diameter, can be closed by flap, in special positions at the back (please, state location)	F7							
4 – 20 mA current loop interface (0 to +260 °C ≙ 4 – 20 mA) Temperature controller actual value	V3							
Temperature of a Pt100 sensor positioned flexibly in chamber for external temperature monitoring (max. 1 SingleDISPLAY, max. 3 TwinDISPLAY)	V6							
Fan speed monitoring with switching off the heating and with alarm in case of failure optional for SFplus only	V4							
Works calibration certificate for 3 temperatures: +160 °C, +180 °C, +250 °C	D00132							
Standard works calibration certificate (measuring point chamber centre) at +160 °C								

Accessories	30	55	75	110	160	260	450	750
Stainless steel grid, electropolished (standard equipment)	E28884	E20164		E20165		E28891	E20182	
Additional reinforced stainless steel grid, electropolished, max. loading 60 kg; from size 450 with guide bars and fixing screws (only in connection with option K1). Please consider max. loading of chamber	–			E29767		E29766	B32190	
Perforated stainless steel shelf	B29727	B03916		B00325		B29725	B00328	
Additional reinforced stainless steel shelf, max. loading 60 kg; with guide bars and fixing screws (only in connection with option K1). Please consider max. loading of chamber	–						B32191	
Stainless steel slide-in drip tray, 15 mm rim (may affect the temperature distribution) – cannot be used in connection with option K1	E02070	E02072		E02073		E29726	E02075	
Max. loading per slide-in drip tray (kg)	1.5			3		4	8	
Stainless steel slide-in drip tray, 15 mm rim, with guide bars and fixing screws (can be used only in connection with option K1)	–						B32763	
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution) – cannot be used in connection with option K1	B04356	B04358		B04359		B29722	B04362	
Max. loading per bottom drip tray (kg)	1.5			3		4	8	
Stainless steel bottom drip tray, 15 mm rim (can be used only in connection with option K1)	–						B34055	
Wall bracket for wall mounting	B29755	B29756	B29757	B29758	B29759	–		
Guarantee extension by 1 year	GA1Q5					GA2Q5		

Further options/accessories see pages 28 - 30.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

Vacuum oven VO
"Celsius" standard software

Model sizes:
200 / 400 / 500
+20 °C to +200 °C
5 mbar to 1100 mbar

VACUUM OVEN VO Memmert vacuum ovens show their full potential with short heating up times, high precision temperature control and turbo drying. At the same time, heat and oxygen sensible materials are treated with incomparable care. Memmert is the only manufacturer worldwide that offers digital pressure control. As addition to the vacuum oven, Memmert offers a special controllable pump for installation in a lower chamber, the pump module, installed on the outside of the vacuum oven.

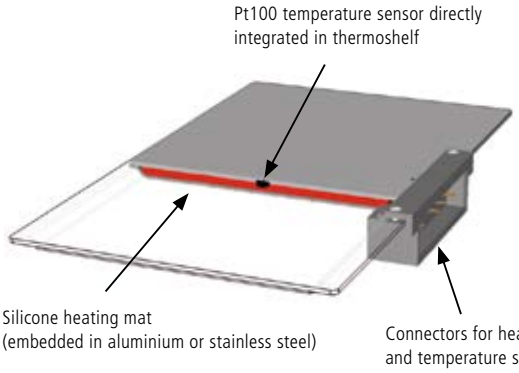
Customised models for every application

As much function as needed, as much customisation as possible! The basic model of the vacuum oven features a thermoshelf, two thermoshelf connectors as well as an USB interface, "Celsius" software and MEMoryCARD. The vacuum oven can be customised with additional functions for individual applications.

- **OPTION INERT GAS INLET:** Programmable and digitally controlled inlet for inert gas with flow rate reduction
- **PREMIUM MODULE:** The option for switching to inert gas well as additional connection (VO200) or two further connections (VO400, VO500) for thermoshelves and one additional thermoshelf (for VO400, VO500), drip tray and interface for printer

Multi-Level-Heating

Each of the thermoshelves that can be inserted as required is equipped with separate large surface heating and its own sensors (Multi-Level-Sensing MLS). The separate control circuits react precisely to different loads and humidity values and maintain the pre-set temperature equally on all the levels used. Due to the direct contact between the heating system and the chamber load, there is practically no loss of heat and heating and process times are reduced by some 75 % compared to a conventional heating system of the interior walls.



Removable thermoshelf with direct heating system and sensor

Repeat function with turbo effect

User-friendly ramp programming saves effort and guarantees reliable processes. Thanks to programming of vacuum cycles, the drying time can be considerably further reduced. Up to 40 ramps with different set temperature and vacuum values can be directly programmed on the device or via the MEMoryCard. When using the "Celsius" software, the number of ramps is practically unlimited.

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:

Standard equipment

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

Internals: Thermoshelf, aluminium, eloxadised material 3.3547 (ASTM B209)

Housing: Textured stainless steel, rear zinc-plated steel, aesthetic functional glass-stainless steel operating panel with multifunction display and input module, safety glass door with inner bullet-proof glass and external anti-splinter screen

Installation: 4 feet

Connection: Mains cable with plug (German type)

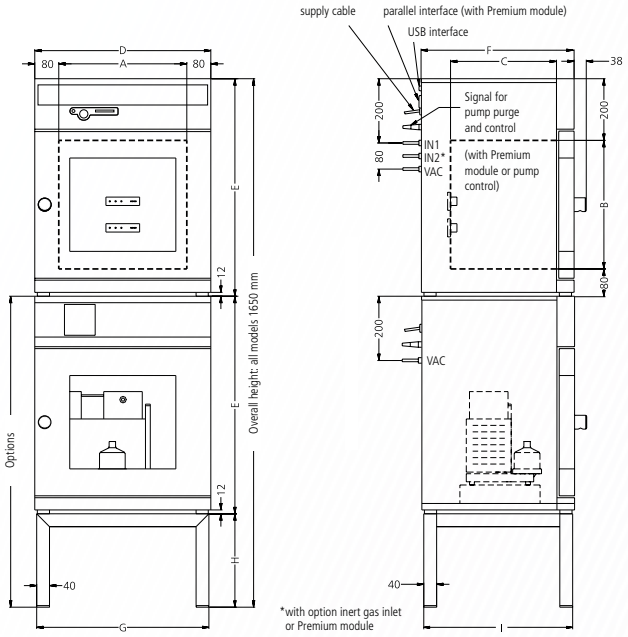
Interfaces:

USB

Optional:

Ethernet
LAN

printer interface
(part of Premium module)



Model sizes/Description				200	400	500
Stainless steel interior	Volume		approx. l	29	49	101
	Width	(A)	mm	385	385	545
	Height	(B)	mm	305	385	465
	Depth	(C)	mm	250	330	400
	Max. number of thermoshelves – basic equipment/with Premium Module		number	2/3	2/4	
	Distance between thermoshelves		mm	75		95
	Maximum load per shelf		approx. kg	20		
	Maximum load per oven		approx. kg	40	60	
Textured stainless steel housing The dimensions also apply to the optional pump module	Width	(D)	mm	550	550	710
	Height	(E)	mm	600	680	760
	Depth (without door handle, depth of handle 38 mm)	(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			□		
Temperature	Electronic microprocessor temperature controller with Pt100 and auto-diagnostic system			□		
	Temperature sensor 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		
	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)	Digital electronic pressure control (in programme operation up to 40 ramps, adjustable for each segment) for vacuum via solenoid valves. 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. Integrated process control with programmable temperature and vacuum cycles enabling amongst others accelerated moisture reduction.			□		
	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		
Monitor	Microprocessor temperature monitor acting as overtemperature protection (protection class 3.1) with Pt100, incorporating fault diagnostics with visual and acoustic alarm			□		
	Digital over- and undertemperature monitor			□		
	Temperature monitoring band automatically linked to the setpoint (ASF)			□		
	Multi-Level-Overtemperature-Protection (MLOP) for each thermoshelf			□		
	Relay for reliable heating cut-off in case of fault			□		

Model sizes/Description			200	400	500
	Mechanical temperature limiter (TB)			□	
	Acoustic alarm: Over- and undertemperature			□	
Timer functions	Real-time/weekly programmer with group function (e.g. Monday – Friday)			□	
	Timer with residual running time: max. 40 ramps (each 1 min. up to 999 h) programmable through controller or MEMoryCard XL; programming via PC and free-of-charge software: unlimited number of ramps			□	
Documentation	Internal log memory 1024 kB as ring memory for all setpoints, actual values, errors, settings with real-time and date; capacity up to 3 months at 1 min. intervals			□	
	"Celsius" software for control and documentation of temperature and pressure			□	
Setup	Calibration (no sep. PC required), temperature and pressure: 3-point calibration on controller			□	
	Setting of language for dialogue and display DE / EN / ES / FR / IT			□	
Connections	Vacuum connection with small flange DN16, and gas inlet with small flange DN 16			□	
Further data	Electrical load (loading with max. number of thermoshelves), at 230 V, 50/60 Hz	approx. W	1200	2000	2400
Standard accessories	Pump control: optimised rinsing procedures for the pump membranes as well as signal output for pump ON/OFF			□	
	Removable interior mounting – stainless steel material 1.4404 (ASTM 316 L) – with integrated lateral guide bars for thermoshelves			□	
	Connectors for thermoshelves	number		2	
	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			□	
Packing data / Vacuum oven	Net weight/Gross weight (packed in carton)	approx. kg	55/76	83/104	110/135
	Packed dimensions Width/Height/Depth	approx. cm	66/87/59	66/87/59	83/105/80
Packing data / Pump module	Net weight without/with pump	approx. kg	25/41	30/46	41/57
	Gross weight (packed in carton) without/with pump	approx. kg	46/62	51/67	66/82
	Packed dimensions Width/Height/Depth	approx. cm	66/87/59	66/87/59	83/105/80
Order No. Vacuum Ovens			**VO200**	**VO400**	**VO500**

Options	200	400	500
Inert gas inlet: programmable and digitally controlled inlet for inert gas with flow rate reduction		W5	
Premium Module: comprises the inert gas inlet, one printer interface, extra connectors for thermoshelves, 1 (size 200), 2 (sizes 400/500), an additional thermoshelf (sizes 400/500) and a drip tray		T5	

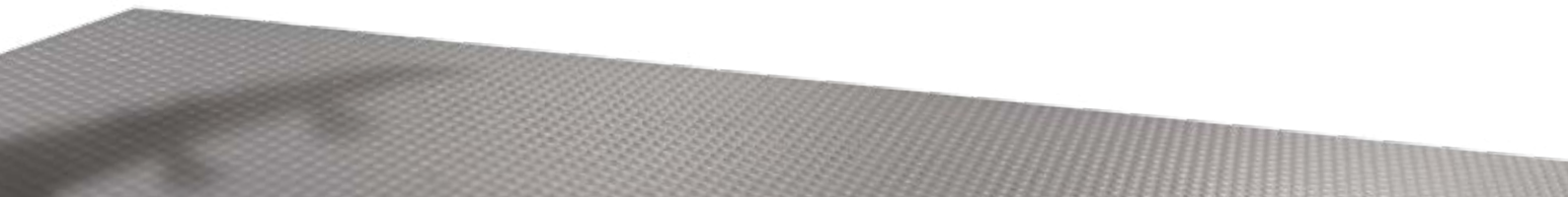
Accessories		200	400	500
Additional thermoshelf – aluminium eloxadised material W.-St. 3.3547 (ASTM B209) with integrated large-area heating including local temperature sensing (Pt100, 4-wire-circuit); individual overtemp. protection for each shelf MLOP (Multi-Level-Overtemperature-Control) and calibration certificate		B00741	B00743	B00744
Additional 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-Overtemperature-Control) and calibration certificate		B00733	B00734	B00735
Removable bottom drip tray – stainless steel material 1.4404 (ASTM 316 L)		E04256	E04257	E04258
Subframe, tubular steel, black enamelled (for stacking unit consisting of vacuum oven and pump module, total height: 1650 mm, see sketch of oven dimensions) Width/Height/Depth (see sketch of oven dimensions) G/H/I	mm	E02030 529/450/ 383	E02031 529/290/ 463	E02037 689/130/ 533
Works calibration certificate for 3 temperatures: +50 °C, +100 °C, +160 °C at 20 mbar pressure			D00115	
Guarantee extension by 1 year (VO only)			GA2Q5	
Noise-insulated vacuum pump module without pump (exterior dimensions and material No. see 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		PM200	PM400	PM500
Noise-insulated vacuum pump module, as above, however with built-in pump, 230 V, 50/60 Hz, (pump B04133 for VO200 and pump B04134 for VO400 and VO500)		PMP200	PMP400	PMP500
Signal cable (3 m) for optimising pump performance by demand-controlled activation of purge of Memmert pump			B04027	
Vacuum connecting hose (3 m) from oven to Memmert pump incl. optimised connection accessories (partially stainless steel)			B04026	
Chemically resistant vacuum pump with PTFE double diaphragm, pump capacity at atm. pressures: approx. 34 Nl./min = 2,04 m³/h and autom. purge control from vacuum oven. Order No. B04027 and B04026 necessary. 230 V, 50 Hz. Max. guarantee period 2 years		B04133	–	
Chemically resistant vacuum pump with PTFE double diaphragm, pump capacity at atm. pressures: approx. 60 Nl./min = 3,6 m³/h and autom. purge control from vacuum oven. Order No. B04027 and B04026 necessary. 230 V, 50/60 Hz. Max. guarantee period 2 years		–	B04134	

Further options/accessories see pages 28 - 30.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

Cooled vacuum oven VOcool
"Celsius" standard software

Model sizes:
200 / 400
+5 °C to +90 °C
5 mbar to 1100 mbar

COOLED VACUUM OVEN VOcool Freeze-drying, the most common means of drying starter cultures and probiotics is very energy-intensive. Furthermore, some bacterial strains do not survive the freezing process. Thanks to low temperature vacuum drying, unstable substances can be dried at moderate temperatures above zero without causing too much damage to the cell structure. Memmert is the first manufacturer worldwide that has developed a cooled vacuum oven for laboratory application.



Fields of application

Thanks to low temperature vacuum drying in VOcool appliances, bacteria and starter cultures in the pharmaceutical and food industry can be gently dried. Additionally, the appliance offers the possibility to simulate programme-controlled transport and storage scenarios to determine the behaviour of active ingredients or volumes under different pressure and temperature conditions.

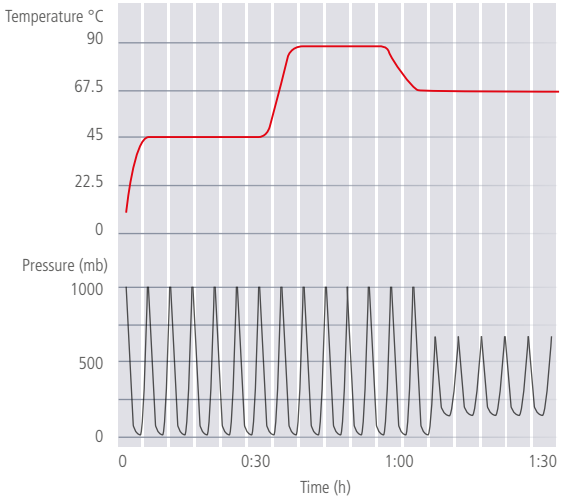
Unparalleled precision

The compact, energy-saving and extremely accurate Peltier-cooling unit guarantees a surface temperature distribution with a maximum deviation of ±1 K across the entire temperature range. Memmert is the only manufacturer worldwide that offers digital pressure control. Ramp programming of temperature and vacuum (-cycles) in combination with heating/cooling of thermoshelves allows for quick processes and nullifies residual humidity.

Maximum time savings

The interior of all Memmert vacuum ovens can be ventilated in cycles to remove humidity quicker with the exhaust air. Thanks to ramp programming of temperature and vacuum cycles, the drying process is optimised and drying times are considerably further reduced in comparison to conventional vacuum drying ovens.

Up to 40 ramps with different set temperature and vacuum values can be directly programmed on the device or via the MEMoryCard. When using the "Celsius" software, the number of ramps is practically unlimited.



Peltier-element

COOLED VACUUM OVENS VOcool

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

CE EAC

Standard equipment

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

Internals: Thermoshelf, aluminium, eloxadised material 3.3547 (ASTM B209)

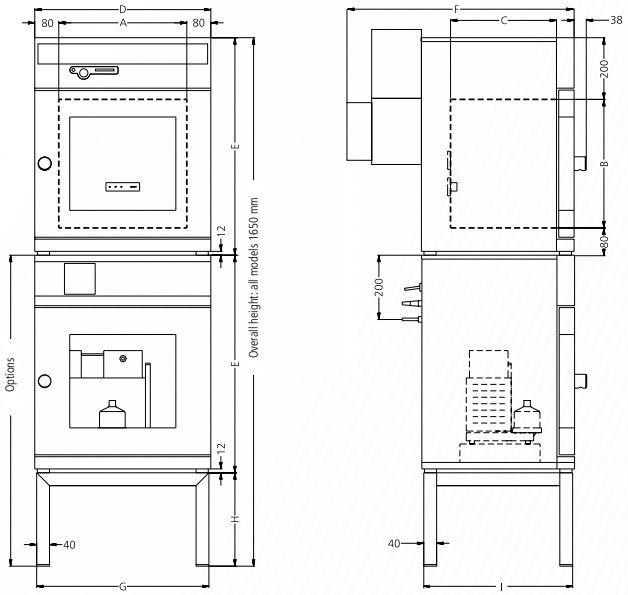
Housing: Textured stainless steel, rear zinc-plated steel, aesthetic functional glass-stainless steel operating panel with multifunction display and input module, safety glass door with inner bullet-proof glass and external anti-splinter screen

Installation: 4 feet

Connection: Mains cable with plug (German type)

Interfaces: USB, printer interface

Optional: Ethernet LAN



Model sizes/Description				200	400
Stainless steel interior	Volume		approx. l	29	49
	Width	(A)	mm	385	385
	Height	(B)	mm	305	385
	Depth	(C)	mm	250	330
	Maximum load per shelf		approx. kg	20	
Textured stainless steel housing (The dimensions also apply to the optional pump module)	Width	(D)	mm	550	550
	Height	(E)	mm	600	680
	Depth (without door handle, depth of handle 38 mm) incl. Peltier-cooling device CDP115	(F)	mm	650	730
	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			□	
Temperature	Electronic microprocessor temperature controller with Pt100 and auto-diagnostic system			□	
	Temperature sensor Pt100 Class A in 4-wire circuit individually for each thermoshelf			□	
	Working-temperature range		°C	+5 to +90	
	Setting temperature range		°C	+5 to +90	
	Temperature variation in time (to DIN 12880:2007-05) (aluminium thermoshelf)		K	≤ ± 0.3	
	Temperature uniformity (surface) at +20 °C/20 mbar		K	≤ ± 1	
Pressure (vacuum)	Digital electronic pressure control (in programme operation up to 40 ramps, adjustable for each segment) for vacuum via solenoid valves. 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. Integrated process control with programmable temperature and vacuum cycles enabling amongst others accelerated moisture reduction.			□	
	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	
Monitor	Microprocessor temperature monitor acting as overtemperature protection (protection class 3.1) with Pt100, incorporating fault diagnostics with visual and acoustic alarm			□	
	Digital over- and undertemperature monitor			□	
	Temperature monitoring band automatically linked to the setpoint (ASF)			□	
	Multi-Level-Overtemperature-Protection (MLOP) for each thermoshelf			□	
	Relay for reliable heating cut-off in case of fault			□	
	Accoustic alarms: Over- and undertemperature			□	

Model sizes/Description			200	400
Timer functions	Real-time/weekly programmer with group function (e.g. Monday – Friday)		□	
	Timer with residual running time: max. 40 ramps (each 1 min. up to 999 h) programmable through controller or MEMoryCard XL; programming via PC and free-of-charge software: unlimited number of ramps		□	
Documentation	Internal log memory 1024 kB as ring memory for all setpoints, actual values, errors, settings with real-time and date; capacity up to 3 months at 1 min. intervals		□	
	"Celsius" software for control and documentation of temperature and pressure		□	
	Parallel interface		□	
Setup	Calibration (no sep. PC required), temperature and pressure: 3-point calibration on controller		□	
	Setting of language for dialogue and display DE / EN / ES / FR / IT		□	
Connections	Vacuum connection with small flange DN16, and gas inlet with small flange DN 16		□	
Further data	Electrical load (loading with max. number of thermoshelves), at 230 V, 50/60 Hz	approx. W	400	500
Standard accessories	Removable interior mounting – stainless steel material 1.4404 (ASTM 316 L) – with integrated lateral guide bars for thermoshelves		□	
	Thermoshelves – aluminium eloxadised, mat. 3.3547 (ASTM B209) – with integral large-area heating/cooling incl. local temperature sensing (Pt100, 4-wire-circuit); individual overtemp. protection for each shelf. Further data see stainless steel inner working chamber	number	1	
	Works calibration certificate(s) (measuring point in the middle of the individual shelf for +50 °C at 20 mbar pressure): a separate certificate is prepared for each thermoshelf ordered and shipped together with the vacuum oven		□	
	Removable bottom drip-tray made of stainless steel No. 1.4404 (ASTM 316 L)		□	
	Inert gas inlet: programmable and digitally controlled inlet for inert gas with flow rate reduction		□	
	Pump control: optimised rinsing procedures for the pump membranes as well as signal output for pump ON/OFF (recommended in combination with PMP)		□	
Packing data / Vacuum oven	Net weight/Gross weight (packed in carton)	approx. kg	76/92	89/112
	Packed dimensions Width/Height/Depth	approx. cm	73/95/67	83/105/80
Packing data / Pump module	Net weight without/with pump	approx. kg	25/41	30/46
	Gross weight (packed in carton) without/with pump	approx. kg	46/62	51/67
	Packed dimensions Width/Height/Depth	approx. cm	73/95/67	83/105/80
Order No. Cooled Vacuum Ovens			**VO200cool**	**VO400cool**

Options	200	400
Extended temperature range (0 °C to +90 °C)	A8	

Accessories		200	400
Removable bottom drip-tray made of stainless steel No. 1.4404 (ASTM 316 L)		E04256	E04257
Subframe, tubular steel, black enamelled (for stacking unit consisting of vacuum oven and pump module, total height: 1650 mm, see sketch of oven dimensions) Width/Height/Depth (see sketch of oven dimensions) G/H/I	mm	E02030 529/450/ 383	E02031 529/290/ 463
Works calibration certificate for 3 temperatures: +5 °C, +30 °C, +90 °C at 20 mbar pressure		D00133	
Guarantee extension by 1 year (VOcool only)		GA2Q5	
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		PM200	PM400
Noise-insulated vacuum pump module, as above, however with built-in pump 230 V, 50/60 Hz (pump B04133 for VO200 and pump B04134 for VO400)		PMP200	PMP400
Signal cable (3 m) for optimising pump performance by demand-controlled activation of purge of Memmert pump		B04027	
Vacuum connecting hose (3 m) from oven to Memmert pump incl. optimised connection accessories (partially stainless steel)		B04026	
Chemically resistant vacuum pump with PTFE double diaphragm, pump capacity at atm. pressures: approx. 34 Nl./min = 2,04 m³/h and autom. purge control from vacuum oven. Order No. B04027 and B04026 necessary. 230 V, 50 Hz. Max. guarantee period 2 years		B04133	–
Chemically resistant vacuum pump with PTFE double diaphragm, pump capacity at atm. pressures: approx. 60 Nl./min = 3,6 m³/h and autom. purge control from vacuum oven. Order No. B04027 and B04026 necessary. 230 V, 50/60 Hz. Max. guarantee period 2 years		–	B04134

Further options/accessories see pages 28 - 30.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

SOFTWARE AtmoCONTROL

AtmoCONTROL – The innovative control and logging software

Parameters such as temperature and humidity as well as the process time can be set directly at the ControlCOCKPIT.
Ramp programming is done via the control and logging software AtmoCONTROL, which features a completely new software design.

Drag, drop & go!

Numerical and graphic programming of complex processes is a thing of the past. Today, programming is done via AtmoCONTROL by means of the mouse or touchpad on your notebook. Even the most complex ramp programmes are created within minutes. Simply drag & drop the graphical symbols for the desired parameters to the input field and change the values according to your wishes with a mouse click.

Programme functions SingleDISPLAY and TwinDISPLAY

- Reading out, managing and organising the data logger
- Saving the log memory in various formats
- Online monitoring of up to 32 connected appliances
- Optical alarms when the alarm limits individually set at the ControlCOCKPIT are exceeded
- Automatic alarm to one or several e-mail addresses

Additional functions TwinDISPLAY

- Intuitive programming and archiving of ramps and programme sequences
- Synchronous visualisation of the created programme sequence during programming
- Application-specific repeat functions (loops) can be inserted within a temperature control programme in any place
- Simple creation of repeating weekly programmes
- Programming, managing and transferring programmes via Ethernet interface or USB port

SPECIAL EQUIPMENT FOR MODELS U, UF TS, UNpa, S, I, ICP, IPP, IPS, HPP, ICH | ICOmed

Options for models U, UF TS, UNpa, S, I, ICP, IPP, IPS, HPP, ICH	30	55	75	110	160	260	400	450	750	1060	1400	50 / 105 / 150 / 240
Door with lock (safety lock); for models UF TS per side; standard with SN/SF and SNplus/SFplus 450 and 750 (not for models ICOmed)	B6											–
Door hinged on the left; for models UF TS per side	B8						–					B8
Potential-free contact (24 V/2 A) with socket to NAMUR NE 28 for external monitoring (indicates when setpoint is reached); models ICOmed: when set points of temperature and CO_2 are reached	H5											
Potential-free contact for combination error message (e.g. supply failure, sensor fault, fuse)	H6											
Potential-free contact (24 V/2 A) with socket to NAMUR NE 28, for signal generation, controlled by programme segment, for free-selectable functions to be activated (e.g. activation of audible and visual signals, exhaust motors, fans, stirrers, etc.). Only for units with TwinDISPLAY; max. 2 contacts on 1-phase appliances; max. 4 contacts on 3-phase appliances (not for models ICOmed)												
2 contacts	H72											–
4 contacts	–							H74				–
Process-dependent door lock (only for units with TwinDISPLAY); for models UF TS see page 11 of oven brochure; not for models ICOmed	D4											–
Door-open-recognition, incl. alarm, shuts down fan and after 30 sec. also heating (only for units with TwinDISPLAY); for models UF TS per side; standard with ICOmed, ICH C, ICH L	V5											–
Flexible Pt100 for positioning in chamber or in load with socket, 4-pin, according to NAMUR NE 28, for external temperature recording (load temperature) max. 3 sensors; not for models ICOmed	H4											–
Flexible Pt100 temperature sensor, positioned flexibly in chamber or load, for local temperature measurement (up to 3 additional sensors are possible). The measured temperature can, if required, be indicated on the display, recorded in the integral data store, and can be documented via the AtmoCONTROL software. Not for models ICOmed	H8											–
MobileALERT, notification by SMS in case of any error or alarm of the device. Requires option H6 "floating contact for alarm"	C3											
MobileALERT for up to 4 alarm notifications; standard: temperature and CO_2 alarm, additionally humidity alarm (when equipped with option K7) and O_2 alarm (when equipped with option T6)	–											C4
Temperature restriction (for UN/UF/UNplus/UFplus/UNm/UFm/UNmplus/ UFmplus and models UF TS); Temperatures: +60, +70, +80, +95, +100, +120, +160, +180, +200, +220 or +250 °C (Please, indicate upon ordering)	A8						–	A8				–
Castor frame (2-part), height 140 mm (not for models UF TS, ICP, ICH, ICH L, ICH C, ICOmed)	R9						–					

Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

SPECIAL EQUIPMENT FOR MODELS U, UF TS, UNpa, S, I, ICP, IPP, IPS, HPP, ICH — ICOmed

Accessories for models U, UF TS, UNpa, S, I, ICP, IPP, IPS, HPP, ICH	30	55	75	110	160	260	400	450	750	1060	1400	50 / 105 / 150 / 240
USB-Ethernet adapter	E06192											
Ethernet connection cable 5 m for computer interface	E06189											
USB User-ID stick (with User-ID licence): Oven-linked authorisation licence (User-ID-programme) on Memory-stick, prevents undesired manipulation by unauthorised third parties. When reordering please specify serial number (only for units with TwinDISPLAY)	B33170											
USB stick with documentation software AtmoCONTROL and operation manual for products with SingleDISPLAY (the standard equipment of appliances with TwinDISPLAY includes one USB stick with AtmoCONTROL). When reordering please specify serial number.	B33172											
Set of height adjustable feet (4 pcs) not available for ICP, ICH, ICH L, ICH C – standard on models ICOmed	B29768						–					
Stacking set (4 pcs) for stacking of appliances of same size (not for models 160, 260, 450, 750, 1060, 1400, ICH110, ICH110L, ICH110C, ICP55, ICP110)	B29744				–							B29744 / –
Stacking set (consisting of stacking corners, one connecting plate for the rear, two wall brackets) for stacking two units ICO150med or ICO240med	–											B42114 (150) B42115 (240)
Plug-in tube extension (outer diam. 60.3 mm, inner 57 mm), straight, for exhaust air ducting (if necessary for connection by hose), only models U, I, S not for models UF TS	B29718										–	
Plug-in tube extension (outer diam. 60.3 mm, inner 57 mm), angled, for exhaust air ducting (if necessary for connection by hose), only models U, I, S not for models UF TS	B29719										–	
Flush-fit unit (stainless steel frame covering gap between oven and wall opening), with air slots	B29728	B29730	B29732	B29734	B29736	B29738	B42116	B29740	B29742	B42118	–	
Flush-fit unit (stainless steel frame covering gap between oven and wall opening), without air slots for models UF TS see page 11 of oven brochure; not for models ICOmed	B29729	B29731	B29733	B29735	B29737	B29739	B42117	B29741	B29743	B42119	–	
Subframe, adjustable in height (size 30 to 75: height 600 mm, size 110 to 450: height 500 mm); not for models ICOmed, UF TS and HPP400	B29745	B29747		B29749		B29751	–	B29753		–		
Subframe, on castors (size 30 to 75: height 660 mm, size 110 to 160: height 560 mm); not for models ICOmed and UF TS	B29746	B29748		B29750						–		
Subframe, adjustable in height, height 130 mm, for example for units with fresh air filter; not for models ICOmed and UF TS	B33657	B33659		B33661		B33664				–		
Software conforming to FDA AtmoCONTROL. Meets the requirements for the use of electronically stored data sets and electronic signatures as laid down in Regulation 21 CFR Part 11 of the US Food and Drug Administration (FDA). Base licence for the control of one unit (only for units with TwinDISPLAY)	FDAQ1											
Integration of additional units (up to max. 15 units) into an already existent FDA-software licence (only for units with TwinDISPLAY)	FDAQ2											
IQ document with device-specific works test data, OQ/PQ check list as support for validation by customer	D00124											
IQ/OQ document with device-specific works test data for one free-selectable temperature value, incl. temperature distribution survey at Memmert for 9 measuring points (size 30), 27 measuring points (sizes 55 – 1060) to DIN 12880:2007-05, PQ check list as support for validation by customer. Further temperature values and validation at customer site on demand	D00125					D00127					–	
IQ/OQ document with device-specific works test data for one free-selectable temperature and humidity value, incl. temperature distribution survey at Memmert for 27 measuring points (26 measuring points on model HPP1400) to DIN 12880:2007-05, PQ check list as support for validation by customer (models HPP and ICH). Validation at customer site on demand	–			D00136	–	D00136	–		D00136			–
IQ/OQ document with device-specific works test data for one free-selectable temperature, humidity and light value, incl. temperature distribution survey at Memmert for 27 measuring points to DIN 12880:2007-05, PQ check list as support for validation by customer (models HPP with light and ICH L). Validation at customer site on demand	–			D00137	–	D00137	–	D00137				–
IQ/OQ document with device-specific works test data for one free-selectable CO_2, humidity and temp. value, incl. temp. distribution survey at Memmert for 27 measuring points to DIN 12880:2007-05, PQ check list as support for validation by customer (models ICH C and ICOmed, on models ICOmed a free-selectable humidity value is only possible with option K7). Validation at customer site on demand	–			D38897	–	D38897	–		D38897	–		D38897
IQ/OQ document with device-specific works test data for one free-selectable CO_2 and temperature value, incl. temperature distribution survey at Memmert for 27 measuring points to DIN 12880:2007-05, PQ check list as support for validation by customer (model ICOmed). Validation at customer site on demand	–											D38898
External measuring instrument with sensors for daylight and UV-light. Product information on demand (models HPP, ICH L, IPPplus)	B04713									–	B04713	–
Ditto with additional measuring head for temperature and humidity measurement. Product information on demand (models HPP, ICH, ICH L, ICH C, IPPplus and ICOmed)	B04714									–		B04714

Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

SPECIAL EQUIPMENT FOR MODELS VO, VOcool, HCP, TTC, CTC

Options for models VO, VOcool, HCP, TTC, CTC	200	400	500	108	153	246	256
Interface Ethernet instead of USB including software				W4			
RS232 interface instead of USB				W6			
Computer interface RS485 (for networking a max. of 16 ovens) instead of RS232				V2			
Door with lock (safety lock, not available for VO, VOcool, TTC/CTC)				B6			
Flexible Pt100 for positioning in chamber or in load with socket, 4-pin,according to NAMUR NE 28, for external temperature recording (load temperature); for VO and VOcool on demand				H4			
Additional Pt100 temperature sensor, positioned flexibly in chamber or load, for local temperature measurement (up to 3 additional sensors are possible). The measured temperature can, if required, be indicated on the multifunction display, recorded in the integral ring store, and can be documented via the "Celsius" software or on an attached printer. (Not available for VO, VOcool, TTC and CTC)				H8			
Potential-free contact (24 V/2 A) with socket, according to NAMUR NE 28 for external monitoring (indicates when setpoint is reached)				H5			
Potential-free contact (24 V/2 A), with socket, according to NAMUR NE 28 for combination error message (e.g. supply failure, sensor fault, fuse)				H6			
Potential-free contact (24 V/2 A), with socket, according to NAMUR NE 28, triple, for signal generation, controlled by programme segment for a total of 3 freely selected functions to be activated (e.g. acoustic and visual signals, exhaust motors, fans, stirrers etc.). Not available for VO, VOcool				H7			
MobileALERT, notification by SMS in case of any error or alarm of the device. Requires option H6 "floating contact for alarm"				C3			

Accessories for models VO, VOcool, HCP, TTC, CTC	200	400	500	108	153	246	256
USB connection cable for computer interface				E03643			
Parallel/USB converter cable with integrated power supply unit to connect HP printers with USB interface to MEMMERT units				E05300			
Documentation package consisting of parallel USB converter cable including PCL3-compatible HP colour inkjet printer with USB interface (HP OfficeJet 6000 or successor) for direct connection of printer to Memmert unit				B04432			
Temperature profile write/read unit for programming via PC, for writing to and reading from the chip card, up to 40 ramps				E05284			
Additional chip card, blank, formatted (32 kB MEMoryCard XL for a maximum of 40 ramps)				E04004			
Oven-linked authorisation card (User-ID-Card) prevents undesired manipulation by unauthorised third parties. When reordering please specify serial number				E04159			
Software conforming to FDA "Celsius FDA Edition". Meets the requirements for the use of electronically stored data sets and electronic signatures as laid down in Regulation 21 CFR Part 11 of the US Food and Drug Administration (FDA). Base licence for the control of one unit				E05019			
Integration per additional unit (up to max.15 units) into an already existent FDA-software licence (E05019)				FDAQ4			
IQ check list with device-specific works test data as support for validation by customer				D00103			
OQ check list with device-specific works test data for one free-selectable temperature value, incl. temperature distribution survey at Memmert for 27 measuring points to DIN 12880:2007-05 as support for validation by customer. Validation at customer site on demand				D00104			
OQ check list with device-specific works test data for one free-selectable temperature and vacuum value, incl. temperature distribution survey at Memmert for 5 measuring points to DIN 12880:2007-05 as support for validation by customer valid for one thermoshelf; ditto for further thermoshelves VO on demand (VO and VOcool only). Validation at customer site on demand				D00117			
OQ check list with device-specific works test data for one free-selectable humidity and temperature value, incl. temperature distribution survey at Memmert for 27 measuring points to DIN 12880:2007-05 as support for validation by customer (models HCP and CTC). Validation at customer site on demand				D00104			
External measuring instrument with sensors for daylight and UV-light, with additional measuring head for temperature and humidity. Product information on demand (models HCP and CTC)				B04714			

Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

MODEL VARIANTS

SingleDISPLAY ControlCOCKPIT with one TFT display	TwinDISPLAY ControlCOCKPIT with two TFT displays
AVAILABLE APPLIANCES **UN/UNm / UF/UFm / IN/INm / IF/IFm / SN / SF / IPP / IPS**	**AVAILABLE APPLIANCES** **UNplus/UNmplus / UFplus/UFmplus / UF TS / UNpa** **INplus/INmplus / IFplus/IFmplus / SNplus / SFplus** **ICOmed / IPPplus / ICP / HPP / ICH**
One high-resolution TFT colour display with touch-sensitive buttons for selection of functions	Two high-resolution TFT colour displays with touch-sensitive buttons for selection of functions
Available parameters on the ControlCOCKPIT: Temperature (Celsius or Fahrenheit), fan speed, exhaust air flap position, programme time	Available parameters on the ControlCOCKPIT: Temperature (Celsius or Fahrenheit), fan speed, exhaust air flap position, programme time, relative humidity, illumination, CO_2
One temperature sensor Pt100 DIN class A in a 4-wire circuit	Two Pt100 sensors DIN class A in a 4-wire circuit for mutual monitoring, taking over functions in case of an error
	HeatBALANCE function for application specific adjustment of heat output distribution (balance) between the upper and lower heating groups in an adjustment range between -50 % and +50 % (not valid for models 30, HPP110, IPP110plus, ICP, ICH)
AtmoCONTROL software for reading out, managing and organising the data logger via Ethernet interface (temporary trial version can be downloaded). USB stick with AtmoCONTROL software available as accessory (on demand)	AtmoCONTROL software on a USB stick for programming, managing and transferring programmes via Ethernet interface or USB port
	ControlCOCKPIT with USB port for uploading programmes, reading out protocol logs, activating the User-ID function
	Displaying of already logged protocol data on the ControlCOCKPIT (max 10,000 values correspond to approx. 1 week)
Ethernet interface on the rear of the appliance for reading out the protocol log and for online logging	Ethernet interface on the rear of the appliance for reading out the protocol log and for uploading programmes and for online logging
Double overtemperature protection: Electronic temperature monitoring with freely adjustable monitoring temperature, for models U, I, S with option A6 TWW/TWB (protection class 3.1 or 2), mechanical temperature limiter TB acc. to DIN 12880	Multiple overtemperature protection: Electronic temperature monitoring TWW/TWB (protection class 3.1 or 2 resp. 3.3 for units with active cooling) and mechanical temperature limiter TB (protection class 1) acc. to DIN 12880, AutoSAFETY automatically adjusts to the set value within a freely adjustable tolerance range. Setting individual MIN / MAX values for over/undertemperature alarm and also for all other parameters such as relative humidity, CO_2

PID microprocessor control with integrated auto-diagnostic system

Structured stainless steel housing, scratch-resistant, robust and durable; rear of zinc-plated steel

High-temperature connectors on the rear of the appliance for single-phase power connection according to country specific systems and IEC standards

Internal data logger with a storage capacity of at least 10 years

German, English, French, Spanish, Polish, Czech, Hungarian language settings available on the ControlCOCKPIT

Digital backwards counter with target time setting, adjustable from 1 minute to 99 days

The SetpointWAIT function guarantees that the process time does not start until the set temperature is reached at all measuring points – optional for temperature values recorded by the freely positionable Pt100 sensors inside the chamber

Adjustment of three calibration values for temperature and additional appliance specific parameters directly at the ControlCOCKPIT

memmert

Experts in Thermostatics

HEATING AND DRYING OVENS

- UNIVERSAL OVEN U
- PASS-THROUGH OVEN UF TS
- PARAFFIN OVEN UNpa
- STERILISER S
- VACUUM OVEN VO
- COOLED VACUUM OVEN VOcool

INCUBATORS

- INCUBATOR I
- CO_2 INCUBATOR ICOmed
- COMPRESSOR-COOLED INCUBATOR ICP
- PELTIER-COOLED INCUBATOR IPP
- COOLED STORAGE INCUBATOR IPS

CLIMATE CHAMBERS

- CONSTANT CLIMATE CHAMBER HPP
- HUMIDITY CHAMBER HCP
- CLIMATE CHAMBER ICH
- ENVIRONMENTAL TEST CHAMBER CTC/TTC

WATERBATHS / OILBATHS

- WATERBATH W
- OILBATH O

YOUR MEMMERT PARTNER

Memmert GmbH + Co. KG
P.O. Box 1720 | D-91107 Schwabach
Tel. +49 9122 925-0 | Fax +49 9122 14585
E-Mail: sales@memmert.com
facebook.com/memmert.family
The platform for experts: www.atmosafe.net

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