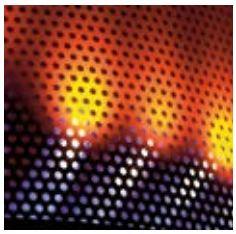


Universal Oven UN/UNm and UF/UFm with SingleDISPLAY
Universal Oven UNplus/UNmplus and UFplus/UFmplus with TwinDISPLAY
Natural convection or forced ventilation
AtmoCONTROL software

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.





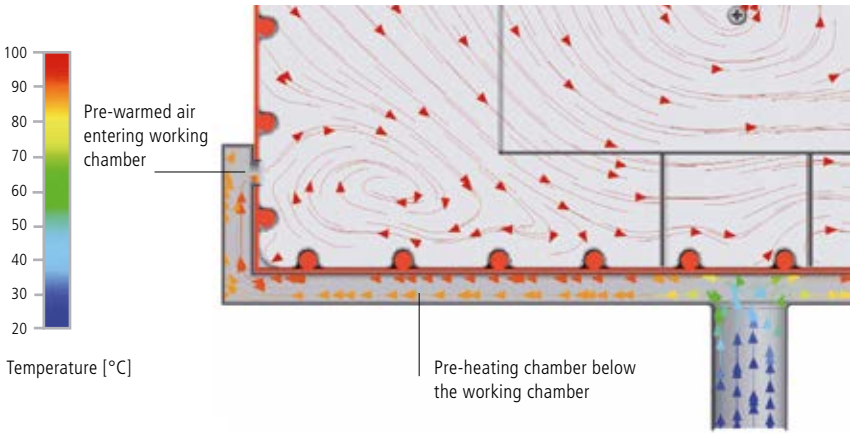
Defined and programme-controlled fan speed

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.

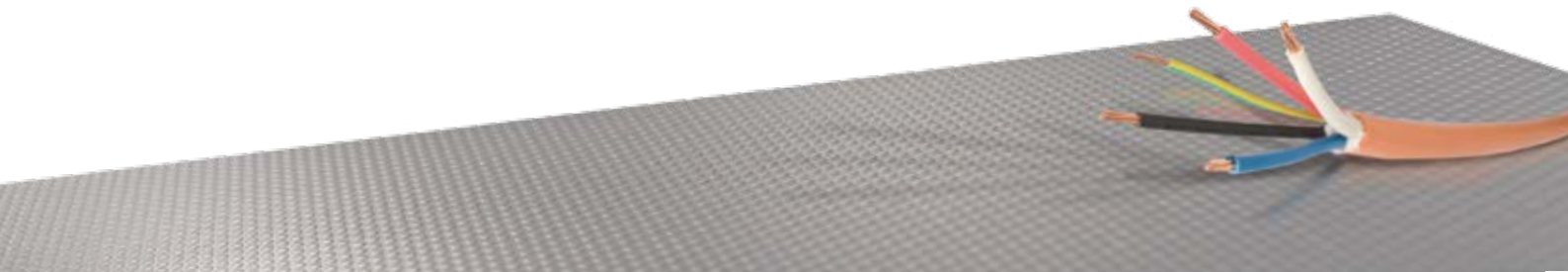
Fresh air is preheated

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 medical product:

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 fabrics and covers, 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)

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)

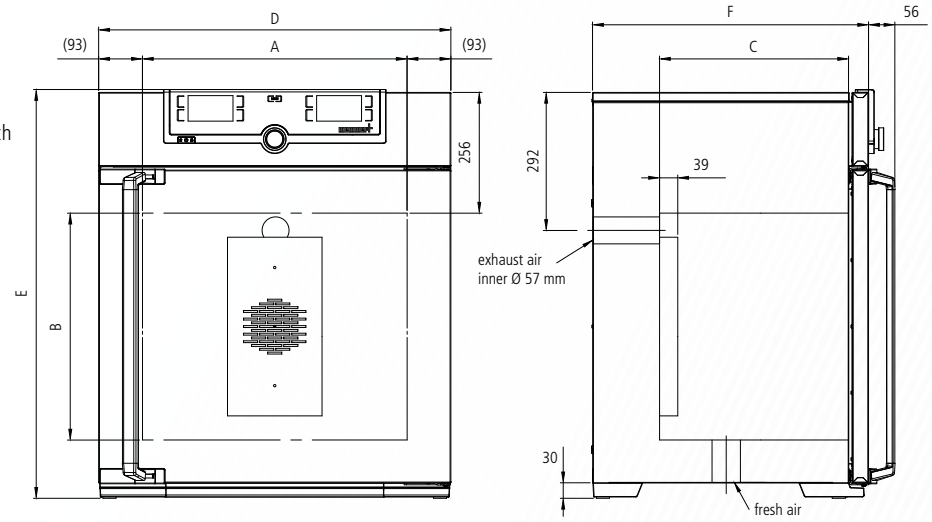
Housing: Textured stainless steel, rear zinc-plated steel, intuitively operated SingleDISPLAY or TwinDISPLAY (TFT colour display) with touchscreen (from size 450 two leaves)

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	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

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.

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

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	ICOmed 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)	B33171												
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	–	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 L, IPPplus)	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 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)				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	