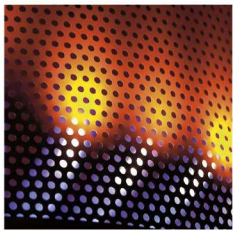
Universal Oven UN and UF with SingleDISPLAY
Universal Oven UNplus and UFplus with TwinDISPLAY
Natural convection or forced air circulation
AtmoCONTROL software

Model sizes:
30 / 55 / 75 / 110 / 160 / 260 / 450 / 750 / 1060
+20 °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.



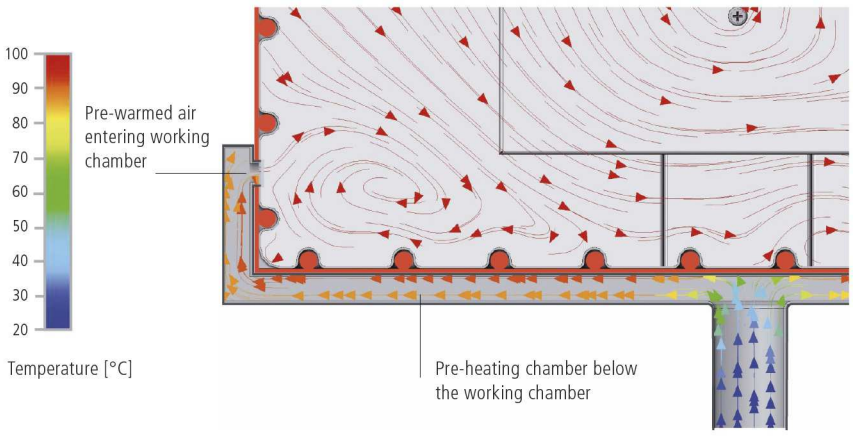
Defined and programme-controlled fan speed

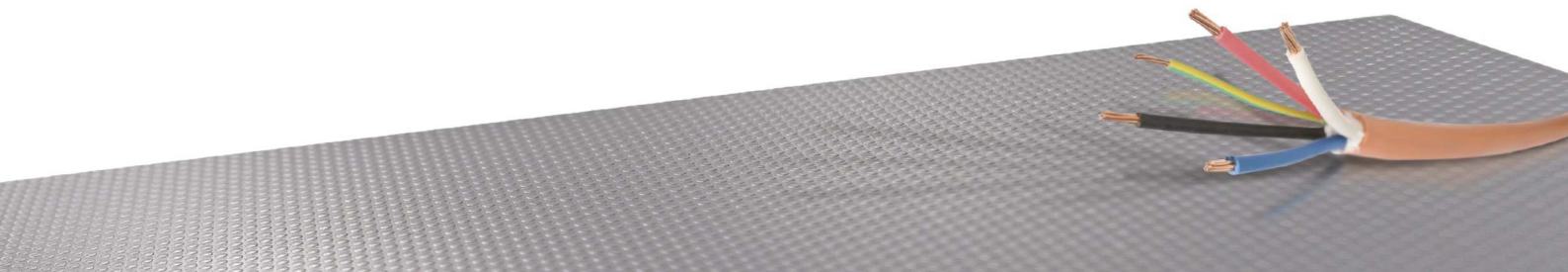
Air exchange rates and air flap position can be controlled electronically at the ControlCOCKPIT. More inlet and outlet openings lead to a higher air exchange and reduced drying times. Various applications recommend or even require controlled ventilation. When drying powder, sand or corn, reducing the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

Other applications like testing of wires or cables demand for defined air exchange rates. UFplus 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.





UNIVERSAL OVENS U

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

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

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

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

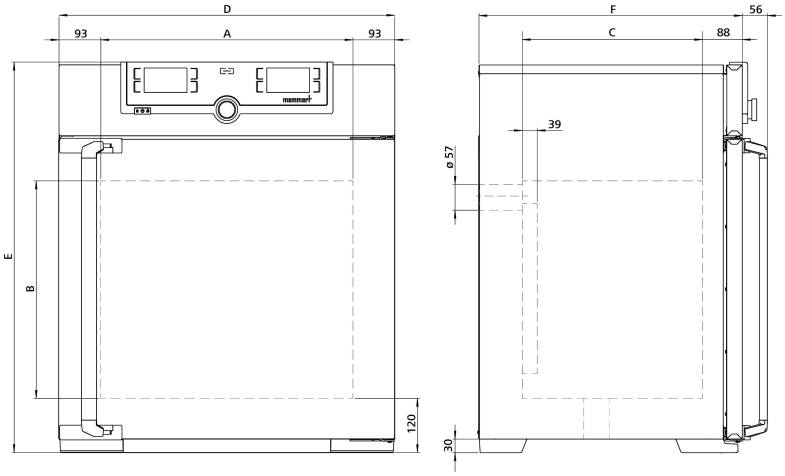
Fresh air: Admixture of pre-heated fresh air by electronically adjustable air flap

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

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		560		640	1040		
	Height	(B)	mm	320	400	560	480	720	800	720	1200	
	Depth (less 39 mm for fan)	(C)	mm	250	330		400		500	600		850
	Max. number of grids/shelves		number	3	4	6	5	8	9	8	14	
	Max. loading per grid/shelf		kg			20				30		20
	Max. loading of chamber		kg	60	80	120	175	210		300		
	Max. loading per slide-in drip tray		kg		1,5		3		4	8		
	Max. loading per bottom drip tray		kg		1,5		3		4	8		
Textured stainless steel exterior	Width	(D)	mm		585		745		824	1224		
	Height (size 450, 750, 1060 with castors)	(E)	mm	704	784	944	864	1104	1183	1247	1720	
	Depth (without door handle, depth of handle +56 mm)	(F)	mm	434	514		584		684	784		1035
Standard equipment	Stainless steel grids, electropolished		number	1		2						
	Standard works calibration certificate (measuring point chamber center)		°C	+160								
Temperature	Working temperature range		°C	at least 5 (UN/UNplus) or 10 (UF/UFplus) 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								
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	
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. mm	660	730		830		930	1330		1370
	Height		approx. mm	890	950	1130	1050	1300	1380	1440	1910	1970
	Depth		approx. mm	650	670		800		930	1050		1300
Universal Ovens				UN30	UN55	UN75	UN110	UN160	UN260	UN450	UN750	-
				UN30plus	UN55plus	UN75plus	UN110plus	UN160plus	UN260plus	UN450plus	UN750plus	-
				UF30	UF55	UF75	UF110	UF160	UF260	UF450	UF750	UF1060
				UF30plus	UF55plus	UF75plus	UF110plus	UF160plus	UF260plus	UF450plus	UF750plus	UF1060plus

U = Universal Oven
N = Natural convection
F = Forced air circulation
plus = Model with TwinDISPLAY

Prices for options are only valid when ordering new appliances.
Not all options/accessories are combinable with each other. Please contact us for individual combination requests.

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 with SingleDISPLAY	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 standard grids by reinforced grids (standard with 1060)	-						K1		-
Fresh-air filter (filtration efficiency 80 %) mounted at the appliance bottom (for UF/UFplus, for sizes requires 30 - 260 castor frame R9 or subframe)	R8								
Interior lighting for observing the load	R0								
Interior socket (can only be ordered with limited temperature range - max. +70 °C), ampacity 230 V, 2.2 A, can be switched off with the On/Off switch, cannot be switched individually, moisture tight IP68 (option A8 necessary)	R3								
Interior nearly gastight - technical clarification required for combination with other options	K2								
Interior nearly gastight with possibility for gas inlet/outlet through 2 tubes with ball valves - technical clarification required for combination with other options	K3								
Entry port, 23 mm clear diameter, for introducing connections at the side, can be closed by flap, standard positions — left centre/centre	F0								
Entry port, 23 mm clear diameter, for introducing connections at the side, can be closed by flap, standard positions — left centre/top	F1								
Entry port, 23 mm clear diameter, for introducing connections at the side, can be closed by flap, standard positions — right centre/centre	F2								
Entry port, 23 mm clear diameter, for introducing connections at the side, can be closed by flap, standard positions — right centre/top	F3								
Entry port, 23 mm clear diameter, can be closed by flap, in special positions (please state location) — left	F4								
Entry port, 23 mm clear diameter, can be closed by flap, in special positions (please state location) — right	F5								
Entry port, 23 mm clear diameter, can be closed by flap, in special positions (please state location) — rear	F6								
Entry port, 14 mm clear diameter, can be closed by flap, in special positions in the back wall (please state location)	D6								
Entry port, 38 mm clear diameter, can be closed by flap, in special positions in the back wall (please state location)	F7								
Entry port, 57 mm clear diameter, can be closed by flap, in special positions in the back wall (please state location; not possible for UF/UFplus size 30-75)	F8								
Entry port, 100 mm clear diameter, can be closed by flap, in special positions in the back wall (please state location; not possible for UF/UFplus size 75)	-		F9						
4 - 20 mA current loop interface (0 to +310 °C = 4 - 20 mA) — Temperature controller, actual value	V3								
4 - 20 mA current loop interface (0 to +310 °C = 4 - 20 mA) — Temperature of a Pt100 sensor positioned flexibly in chamber for external temperature monitoring (max. 1 SingleDISPLAY, max. 3 TwinDISPLAY) - price per sensor	V6								
Fan speed monitoring with switching off the heating and with alarm in case of failure (for UFplus)	V4								
Works calibration certificate for 3 temperatures: +100, +160, +220 °C	D00128								
Works calibration certificate for one (freely selectable) temperature value according to customer specification	D00109								
Door with lock and key (safety lock)	B6								
Door hinged on the left	B8						-		
Potential-free contact for combination error message (e.g. supply failure, sensor fault, fuse)	H6								
Potential-free contact (24 V/2 A) with socket, 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 — 2 contacts	H72								
Process-dependent programmable door lock (only for units with TwinDISPLAY)	D4								
Door-open-recognition (only for units with TwinDISPLAY)	V5								
Flexible Pt100 temperature sensor, positioned flexibly in chamber or load, for local temperature measurement (up to 1 additional sensor is possible). The measured temperature will be indicated on the display, recorded in the integral data store, and can be documented via the AtmoCONTROL software	H8								
MobileALERT, notification by SMS in case of any error or alarm of the device (requires option H6)	C3								

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Options	30	55	75	110	160	260	450	750	1060
Temperature restriction; Temperatures: +60, +70, +80, +95, +100, +120, +160, +180, +200 or +250 °C (Please indicate upon ordering)	A8								
Castor frame (2-part), height 140 mm	R9						-		

Accessories	30	55	75	110	160	260	450	750	1060
Stainless steel grid, electropolished	E28884	E20164		E20165		E28891	E20182		B41251
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		B32550
Perforated stainless steel shelf	B29727	B03916		B00325		B29725	B00328		-
Reinforced stainless steel shelf, max. loading 60 kg; with guide bars and fixing screws (requires option K1). Please consider max. loading of chamber	-						B32191		B32549
Stainless steel slide-in drip tray, 15 mm rim (may affect the temperature distribution, not in connection with option K1)	E02070	E02072		E02073		E29726	E02075		B32599
Stainless steel slide-in drip tray, 15 mm rim, with guide bars and fixing screws (may affect the temperature distribution, only in connection with option K1)	-						B32763		-
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution, not in connection with option K1)	B04356	B04358		B04359		B29722	B04362		B29769
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution, only in connection with option K1)	-						B34055		-
Wall bracket for wall mounting	B29755	B29756	B29757	B29758	B29759	-			
Guarantee extension by 1 year	GA1Q5					GA2Q5			
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)	B29768						-		
Stacking set (4 pcs) for stacking of appliances of same size	B29744					-			
Plug-in tube extension (outer diam. 60.3 mm, inner 57 mm), straight, for exhaust air ducting (if necessary for connection by hose)	B29718								
Plug-in tube extension (outer diam. 60.3 mm, inner 57 mm), angled, for exhaust air ducting (if necessary for connection by hose)	B29719								
Flush-fit unit (stainless steel frame covering gap between oven and wall opening), with air slots	B29728	B29730	B29732	B29734	B29736	B29738	B29740	B29742	
Flush-fit unit (stainless steel frame covering gap between oven and wall opening), without air slots	B29729	B29731	B29733	B29735	B29737	B29739	B29741	B29743	
Subframe, adjustable in height (size 30 to 75: height 600 mm, size 110 to 450: height 500 mm)	B29745	B29747		B29749		B29751	B29753	-	
Subframe, on castors (size 30 to 75: height 660 mm, size 110 to 160: height 560 mm)	B29746	B29748		B29750		-			
Subframe, adjustable in height, height 130 mm, for example for units with fresh air filter	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). Respective IQ/OQ documents available in German and English language (without surcharge)	FDAQ1								
Integration of one additional unit (up to max. 31 units) into an already existent FDA-software licence (only for units with TwinDISPLAY)	FDAQ2								
DAkkS calibration for one free-selectable temperature value according to method C (DKD-R 5-7)	E39696								
DAkkS calibration for further temperature values according to method C (DKD-R 5-7)	E39697								
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. 305 € for further temperature values	D00125	D00127							
On-site IQ/OQ for a freely selectable temperature value, including temperature distribution survey for 9 measuring points (size 30), 27 measuring points (sizes 55-1060) to DIN 12880: 2007-05 (plus travel costs, not subject to discount, only D, A, FR)	DLQ100								
Extension of DLQ100 by an additional freely selectable temperature value (not subject to discount)	DLQ100A								
Individual on-site Performance Qualification (PQ)	DLQ200								

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Accessories	30	55	75	110	160	260	450	750	1060
Maintenance UIS - carrying out and documentation according to Memmert maintenance plan (excluding travel costs, not subject to discount, GER, AT, FR only)					S00311				
Maintenance contract UIS - carrying out and documentation according to Memmert maintenance plan, minimum duration 3 years (excluding travel costs, not subject to discount, GER, AT, FR only)					S00311J				
Calibration of one freely selectable temperature value (excluding travel costs, not subject to discount, GER, AT, FR only)					S00205				
Calibration of an additional temperature value (not subject to discount)					S00215				

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MODEL VARIANTS

SingleDISPLAY ControlCOCKPIT with one TFT display	TwinDISPLAY ControlCOCKPIT with two TFT displays
AVAILABLE APPLIANCES	**AVAILABLE APPLIANCES**
UN / UF / IN / IF / IPPeco / IPP / UNm / UFm / INm / IFm / SN / SF / IFbw	**HPPeco / ICHeco / ICH / HCP / UNplus / UFplus / UF TS / UNpa / VO / INplus / IFplus / ICO / IPPecoplus / IPPplus / ICPeco / ICP / UNmplus / UFmplus / INmplus / IFmplus / SNplus / SFplus / ICOmed**
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 Control COCKPIT: All parameters of the SingleDISPLAY and device-specific parameters like relative humidity, illumination and 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, HPP110eco, IPP110ecoplus, ICPeco, ICP, ICHeco, ICH)
AtmoCONTROL software[1)] 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[1)] 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 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

1) As a manufacturer, Memmert GmbH + Co. KG clearly labels its devices, which are medical devices in the sense of the European legislation. The AtmoCONTROL software is not a medical device. All Memmert medical devices can be used for their purpose without the software AtmoCONTROL. AtmoCONTROL is only intended for reading the data logging in conjunction with Memmert GmbH + CO. KG medical devices.

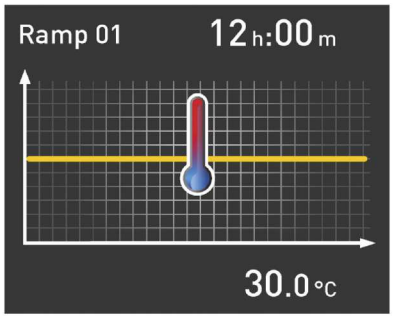
SOFTWARE AtmoCONTROL

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.

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.

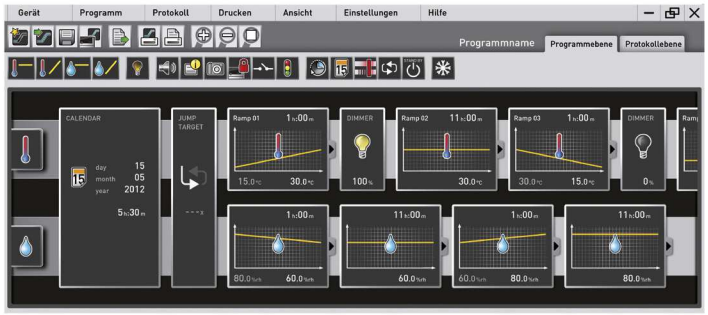


Programme functions for appliances with SingleDISPLAY and TwinDISPLAY

- 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 for appliances with 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



Device Modifications - Proven and Good

The perfect extension for your Memmert appliance
Our mission at Memmert is to provide you with the best possible solution for your individual application. With the increasing complexity of customer processes, a custom-fit modification of our appliances has many advantages for your application. Through modifications, process and set-up times can be significantly reduced or errors in the application can be completely ruled out by monitoring devices. Even small measures, such as individually adapted accessories, have a noticeable influence on the ergonomics and user-friendliness in the operation of the appliance.

You as a customer have the best ideas - and often already have a specific idea of how our products can be better used in your working environment.

Tell us about your thoughts and let us create an individual solution together with you! Please contact us and call us at +49 9122-925-0 or send us an email to sonderbau@memmert.com.

The Memmert customisation department team is looking forward to hearing from you!

Versatile modifications for our standard appliances

Mechanics

- Customised interior fittings
- Individual entry ports in all sizes and shapes
- Telescopic slide pull-outs for ergonomic loading

Electronics

- Extended parameter monitoring e.g. by means of additional measuring sensors
- Optical and acoustic process monitoring e.g. by means of a traffic light system

Software

- Additional interfaces for data evaluation
- Individual temperature, humidity and CO_2 parameters

Accessories

- Tailor-made subframe and stacking options
- Modified grids and shelves
- Individual air filters

Customised solutions for your requirements

Our expertise as a development partner in plant and project business
The Memmert customisation department has been active in the project business for over 20 years now and has proven itself in countless projects as a strong and reliable partner. The experts in customisation benefit from two aspects: Access to the complete capacities of an ultra-modern and specialised production line, as well as the entire technical know-how of the Memmert company in designing climate and temperature control appliances. Combined with the experience of our project managers, the Memmert customisation department is also able to find a solution for the most complex requirements.

Special sizes
Does your product not fit into a standard unit? We build appliances to measure! Whether you need more volume in the interior or there is not enough space for installation at the installation location, we have the expertise to design your appliance individually. Ask us!

Process and plant integration
Integrate our technology seamlessly into your plant or your work organisation. We will find the right solution together for your process integration:

- Preparation for integration into your plant
- Integration of your processes into our appliances
- Inclusion of customer-specific installations
- Interface for semi-automatic assembly

Project business
Are you a project developer with ideas for innovative products and looking for a strategic cooperation? Take advantage of our know-how and manufacturing capacities for your project. Our customisation department will be pleased to hear from you!