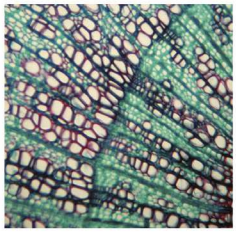
Paraffin oven UNpa with TwinDISPLAY
AtmoCONTROL software

Model sizes:
30 / 55 / 75 / 110 / 160
+20 °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.

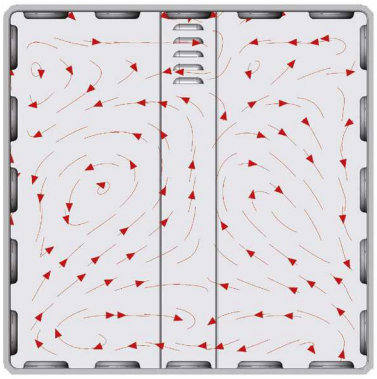
Safe warming of paraffin

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.

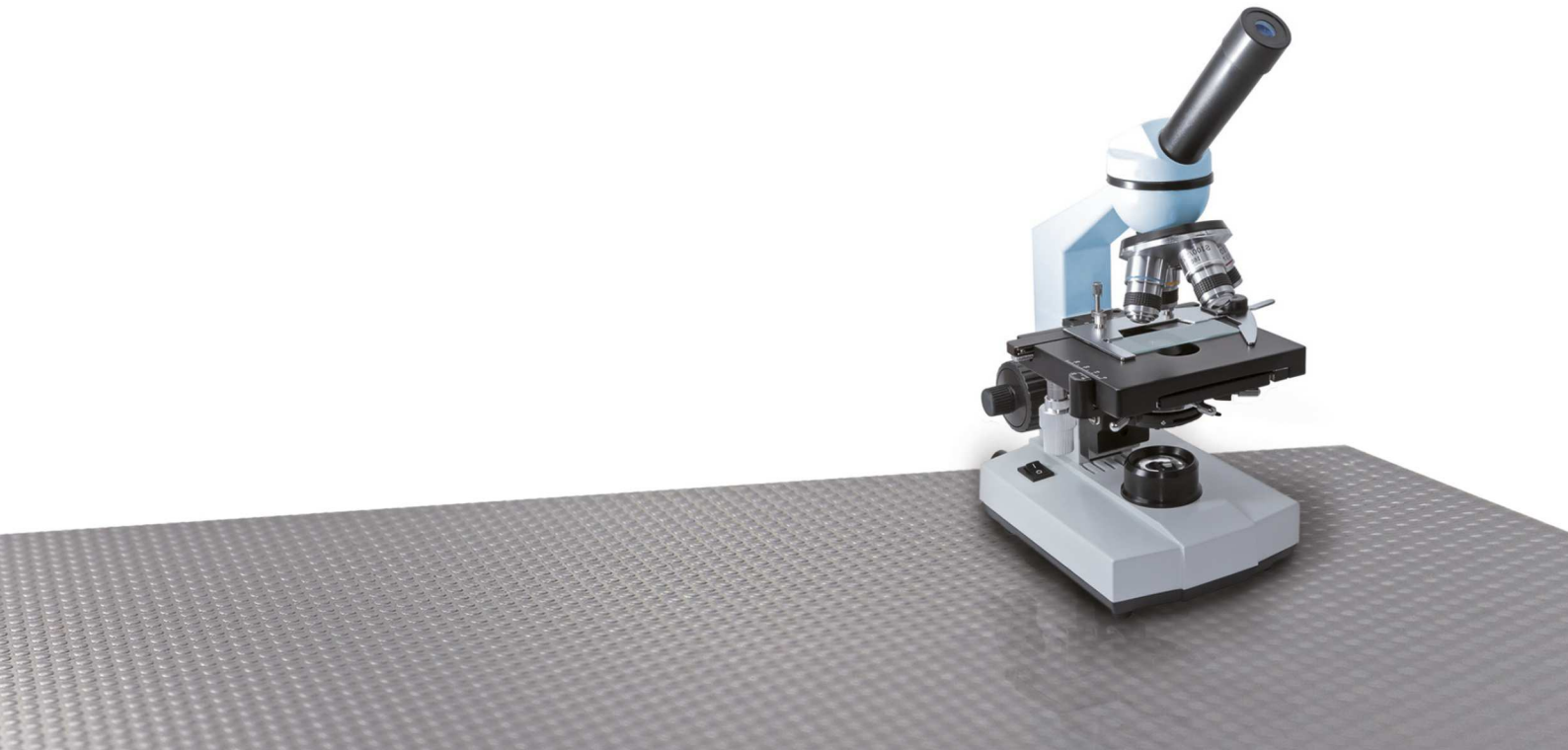


Absolutely uniform temperature distribution

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), EN 61010-2-010

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

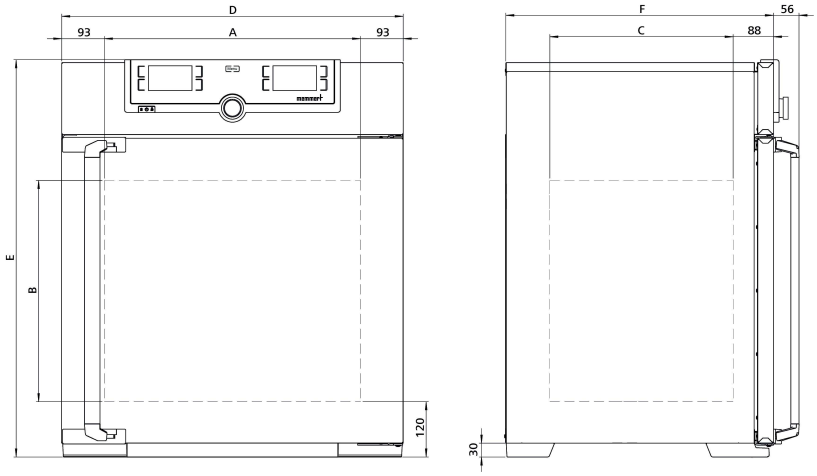
Interior: Stainless steel, material 1.4301 (ASTM 304), with all-round deep-drawn ribs to integrate the large-area heating with ceramic-metal sheath, nearly gastight

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		560	
	Height	(B)	mm	320	400	560	480	720
	Depth	(C)	mm	250	330		400	
	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
	Max. loading per slide-in drip tray		kg		1.5		3	
	Max. loading per bottom drip tray		kg		1.5		3	
Textured stainless steel exterior	Width	(D)	mm		585		745	
	Height	(E)	mm	704	784	944	864	1104
	Depth (without door handle, door handle +56 mm)	(F)	mm	434	514		584	
Standard equipment	Stainless steel grids, electropolished		number	1		2		
	Standard works calibration certificate (measuring point chamber center)		°C			+80		
Temperature	Working temperature range		°C			at least 5 above ambient temperature to +80		
	Setting temperature range		°C			+20 to +80		
	Setting accuracy		°C			0.1		
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	
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. mm	660	730		830	
	Height		approx. mm	890	950	1130	1050	1300
	Depth		approx. mm	650	670		800	
Order No. Paraffin Ovens				UN30pa	UN55pa	UN75pa	UN110pa	UN160pa

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
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, gastight, can be closed by flap and silicone stopper, standard positions - technical clarification required	left centre/centre			F0		
	left centre/top			F1		
	right centre/centre			F2		
	right centre/top			F3		
Entry port, 23 mm clear diameter, gas tight, can be closed by flap and silicone stopper, in special positions (please state location) - technical clarification required	left			F4		
	right			F5		
	rear			F6		
Entry port (silicone), 40 mm clear diameter, gas tight, can be closed by silicone stopper, in special positions at the back (please state location) - technical clarification required				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) - price per sensor			V6		
Gas inlet/outlet through 2 tubes with ball valves - technical clarification required for combination with other options				K3		
Works calibration certificate for 3 temperatures: +37, +52, +70 °C				D00126		
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.)	2 contacts			H72		
Process-dependent programmable door lock				D4		
Door-open-recognition				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		
Castor frame (2-part), height 140 mm				R9		

Accessories	30	55	75	110	160
Stainless steel grid, electropolished	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	
Stainless steel bottom drip tray, 15 mm rim (may affect the temperature distribution)	B04356	B04358		B04359	
Wall bracket for wall mounting	B29755	B29756	B29757	B29758	B29759
Guarantee extension by 1 year	GA1Q5				
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	B33170				
Set of height adjustable feet (4 pcs)	B29768				
Stacking set (4 pcs) for stacking of appliances of same size	B29744				-
Flush-fit unit (stainless steel frame covering gap between oven and wall opening), with air slots	B29728	B29730	B29732	B29734	B29736
Flush-fit unit (stainless steel frame covering gap between oven and wall opening), without air slots	B29729	B29731	B29733	B29735	B29737
Subframe, adjustable in height (size 30 to 75: height 600 mm, size 110 to 160: height 500 mm)	B29745	B29747		B29749	
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	
FDA conforming software AtmoCONTROL (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. Respective IQ/OQ documents available in German and English language (without surcharge)	FDAQ1				
Integration of additional units (up to max. 31 units) into an already existent FDA-software licence	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 - 160) to DIN 12880: 2007-05 (excluding travel costs, not subject to discount, GER, AT, FR only)	DLQ100				

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Accessories	30	55	75	110	160
Extension of DLQ100 by an additional freely selectable temperature value (not subject to discount)			DLQ100A		
Individual on-site Performance Qualification (PQ)			DLQ200		
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.

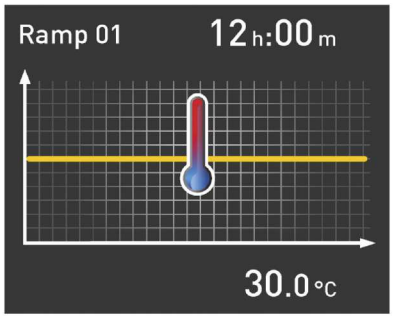
SOFTWARE AtmoCONTROL

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.

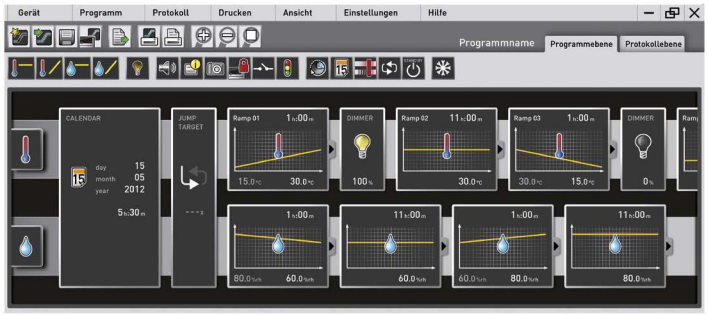


Programme functions for appliances with SingleDISPLAY and TwinDISPLAY

- 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!