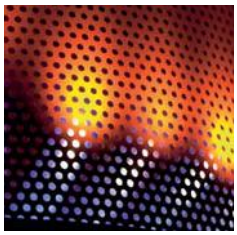
GENERATION 2012

Universal Oven UN and UF with SingleDISPLAY
Universal Oven UNplus and UFplus with Twin DISPLAY
Natural convection or forced ventilation
AtmoCONTROL software

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

UNIVERSAL OVENS U The all-round genius among the heating ovens cover a multitude of applications, ideally at temperatures above +50 °C. Without compromises! Thanks to two model variants and eight 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.

AtmoSAFE

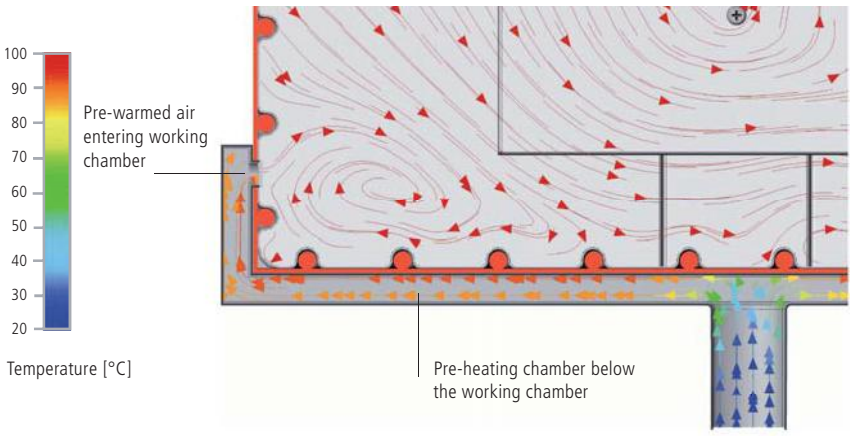


Defined and programme-controlled fan speed

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.

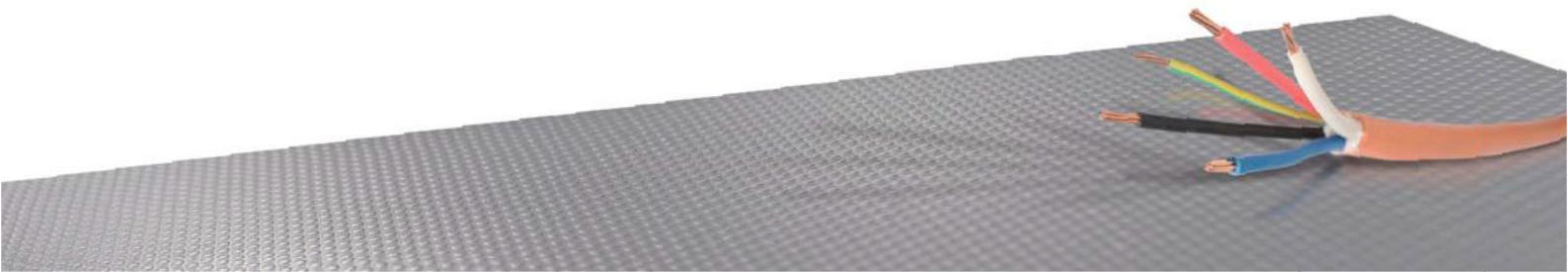
Fresh air is preheated

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



Intended purpose as a medical device:

Heating ovens UF and UFplus are applied for heating of non-sterile fabrics and covers.



UNIVERSAL OVENS U

according to 12 880: 2007-05, EN 61010-1 (IEC 61010-1), 61010-2-010

CE

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 (sizes 30 and 55: 1 grid, sizes 75 – 750: 2 grids)

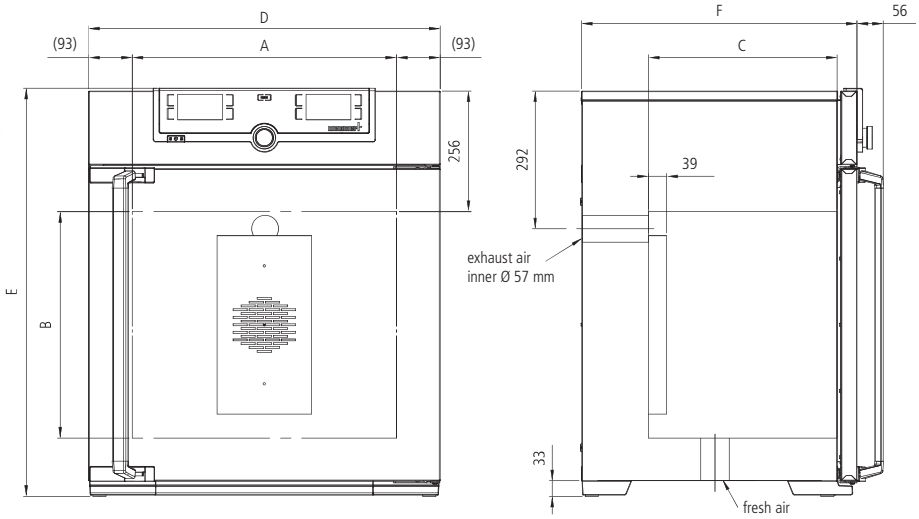
Housing: Textured stainless steel, rear zinc-plated steel, intuitively operated SingleDISPLAY or TwinDISPLAY with Multi-Touchscreen (from size 450 two leaves)

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 39 mm for fan) (C)	mm	250	330	330	400	400	500	600	600
	Stainless steel grids (standard equipment)	number	1	1	2	2	2	2	2	2
	Max. number of grids	number	3	4	6	5	8	9	8	14
	Max. loading per grid	kg	30							
	Max. loading of chamber	kg	60	80	120	175	210	300	300	300
Textured stainless steel exterior	Width (D)	mm	585	585	585	745	745	824	1224	1224
	Height (size 450, 750 with castors) (E)	mm	707	787	947	867	1107	1186	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	2000	2400	2400	2400	2400	–	
	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 K (UN/UNplus) at least 10 K (UF/UFplus) above ambient temperature to +300							
	Setting temperature range	°C	+20 to +300							
	Setting accuracy	K	up to 99.9 °C: 0.1 / from 100 °C: 0.5							
Packing data	Net weight	approx. kg	44	55	64	72	80	96	160	192
	Gross weight (packed in carton)	approx. kg	55	67	76	86	96	114	185	242
	Width	approx. cm	69	70	70	83	83	93	134	134
	Height	approx. cm	86	94	111	104	127	134	141	189
	Depth	approx. cm	66	73	73	79	79	89	99	99

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

UN30	UN55	UN75	UN110	UN160	UN260	UN450	UN750
UN30plus	UN55plus	UN75plus	UN110plus	UN160plus	UN260plus	UN450plus	UN750plus
UF30	UF55	UF75	UF110	UF160	UF260	UF450	UF750
UF30plus	UF55plus	UF75plus	UF110plus	UF160plus	UF260plus	UF450plus	UF750plus

Options	30	55	75	110	160	260	450	750
Full-sight glass door (4 insulating glass)	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	
Fresh-air filter (filtration efficiency 80 %) mounted at the bottom (for UF/UFplus)	R8							
Interior lighting (up to size 260: 15 W, sizes 450/750: 2 x 15 W)	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	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 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 rear	 F4 F5 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							
Entry port, 120 mm clear diameter, can be closed by flap, in special positions at the back (please, state location)	D7							
4 – 20 mA current loop interface (0 to +310 °C ≙ 4 – 20 mA) Temperature controller actual value Temperature of a Pt100 sensor positioned flexibly in chamber (max. 1 SingleDISPLAY, max. 3 TwinDISPLAY)	 V3 V6							
Fan speed monitoring – optional for UFplus only	V4							
Works calibration certificate for 3 temperatures: +100 °C, +160 °C, +220 °C	D00128							

Accessories	30	55	75	110	160	260	450	750
Stainless steel grids (standard equipment)	E28884	E20164		E20165		E28891	E20182	
Reinforced stainless steel grid, max. loading 60 kg (from size 450 only in connection with option K1)	–			E29767		E29766	E20185	
Perforated stainless steel shelf	B29727	B03916		B00325		B29725	B00328	
Reinforced perforated stainless steel shelves, max. loading 60 kg (from size 450 only in connection with option K1)	–			B29777		B29724	B00844	
Stainles steel tray (non-perforated) 15 mm rim (may affect the temperature distribution)	E02070	E02072		E02073		E29726	E02075	
Bottom drip tray (may affect the temperature distribution)	B04356	B04358		B04359		B29722	B04362	
Wall bracket (tubular frame for wall mounting)	B29755	B29756	B29757	B29758	B29759	–		
Guarantee extension by 1 year	GA1Q5					GA2Q5		

Model variations of Generation 2012

GENERATION 2012

SingleDISPLAY
ControlCOCKPIT with one TFT display

AVAILABLE APPLIANCES

UN / UF / IN / IF / SN / SF / IPP / IPS

Available parameters on the ControlCOCKPIT: Temperature (Celsius or Fahrenheit), fan speed, exhaust air flap position, programme time

One temperature sensor Pt100 DIN class A in a 4-wire circuit

Ethernet interface on the rear of the appliance for reading out the protocol log

Double overtemperature protection: Electronic temperature monitoring with freely adjustable monitoring temperature, mechanical temperature limiter TB acc. to DIN 12 880.

TwinDISPLAY
ControlCOCKPIT with two TFT displays

AVAILABLE APPLIANCES

UNplus / UFplus / UNpa / INplus / IFplus / SNplus / SFplus IPPplus / ICP / HPP / ICH

Available parameters on the ControlCOCKPIT: Temperature (Celsius or Fahrenheit), fan speed, exhaust air flap position, programme time, relative humidity, illumination, CO_2

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 %

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 uploading and implementing programmes and for online logging

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 12 880, 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.

Structured stainless steel housing, rear of zinc-plated steel, ControlCOCKPIT for operation and adjustment of all parameters

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 language settings available on the ControlCOCKPIT

Digital timer, adjustable between 1 minute and 99 days, 23 hours

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 (e. g. relative humidity)