

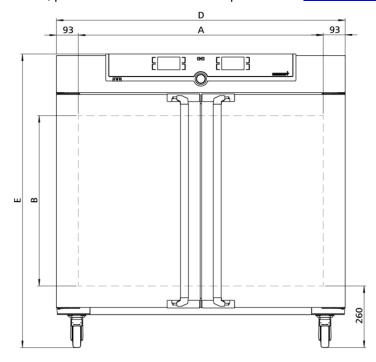
# UF450plus

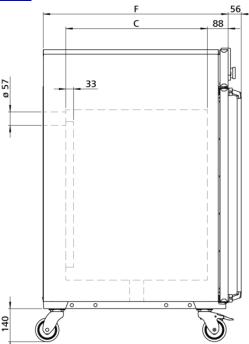
Precise drying, heating, ageing, burn-in and hardening in research, science, industry and quality assurance.



The universally applicable lab oven U is Memmert's classic appliance for temperature control in science, research and material tests in industry. The technologically perfected masterpiece made of high-quality, hygienic, easy-to-clean stainless steel leaves nothing to be desired in terms of ventilation and control technology, overtemperature protection and precisely tuned heating technology.

On this page, you can find all the essential technical data on the universal Memmert lab oven. Our customer relations team will be pleased to help if you want further information. If you should require a customised special solution, please contact our technical specialists at <a href="mailto:sales@memmert.com">sales@memmert.com</a>.





Temperature	
Working temperature range	at least 5 (UN/UNplus/UNm/UNmplus) or 10 (UF/UFplus/UFm/UFmplus) above ambient temperature to +300 $^{\circ}\text{C}$
Setting accuracy temperature	up to 99.9 °C: 0.1 / from 100 °C: 0.5
Setting temperature range	+20 to +300 °C
Temperature sensor	2 Pt100 sensors DIN Class A in 4-wire-circuit for mutual monitoring, taking over functions in case of an error
Control technology	
ControlCOCKPIT	TwinDISPLAY. Adaptive multifunctional digital PID-microprocessor controller with 2 high-definition TFT-colour displays.
Language setting	German, English, Spanish, French, Polish, Czech, Hungarian
Timer	Digital backwards counter with target time setting, adjustable from 1 minute to 99 days
Function HeatBALANCE	adapting the distribution of the heating performance of the upper and lower heating circuit from -50 $\%$ to +50 $\%$
Function SetpointWAIT	the process time does not start until the set temperature is reached
Calibration	three freely selectable temperature values
adjustable parameters	temperature (Celsius or Fahrenheit), fan speed, air flap position, programme time, time zones,
	summertime/wintertime
Ventilation Fan	summertime/wintertime  forced air circulation by quite air turbine, adjustable in 10 % steps for each segment individually
Fan	forced air circulation by quite air turbine, adjustable in 10 % steps for each segment individually
Fan Fresh air	forced air circulation by quite air turbine, adjustable in 10 % steps for each segment individually  Admixture of pre-heated fresh air by electronically adjustable air flap
Fan Fresh air Vent	forced air circulation by quite air turbine, adjustable in 10 % steps for each segment individually  Admixture of pre-heated fresh air by electronically adjustable air flap
Fan Fresh air Vent Communication	forced air circulation by quite air turbine, adjustable in 10 % steps for each segment individually  Admixture of pre-heated fresh air by electronically adjustable air flap  vent connection with restrictor flap
Fan Fresh air Vent  Communication Documentation	forced air circulation by quite air turbine, adjustable in 10 % steps for each segment individually  Admixture of pre-heated fresh air by electronically adjustable air flap  vent connection with restrictor flap  programme stored in case of power failure  AtmoCONTROL software on a USB stick for programming, managing and transferring programmes
Fan Fresh air Vent  Communication Documentation Programming	forced air circulation by quite air turbine, adjustable in 10 % steps for each segment individually  Admixture of pre-heated fresh air by electronically adjustable air flap  vent connection with restrictor flap  programme stored in case of power failure  AtmoCONTROL software on a USB stick for programming, managing and transferring programmes
Fan Fresh air Vent  Communication Documentation Programming  Safety	forced air circulation by quite air turbine, adjustable in 10 % steps for each segment individually  Admixture of pre-heated fresh air by electronically adjustable air flap  vent connection with restrictor flap  programme stored in case of power failure  AtmoCONTROL software on a USB stick for programming, managing and transferring programmes via Ethernet interface or USB port  mechanical temperature limiter TB, protection class 1 according to DIN 12880 to switch off the heating
Fan Fresh air Vent  Communication Documentation Programming  Safety Temperature control	forced air circulation by quite air turbine, adjustable in 10 % steps for each segment individually  Admixture of pre-heated fresh air by electronically adjustable air flap  vent connection with restrictor flap  programme stored in case of power failure  AtmoCONTROL software on a USB stick for programming, managing and transferring programmes via Ethernet interface or USB port  mechanical temperature limiter TB, protection class 1 according to DIN 12880 to switch off the heating approx. 20°C above nominal temperature  overtemperature monitor TWW, protection class 3.1 or adjustable temperature limiter TWB, protection
Fan Fresh air Vent  Communication Documentation Programming  Safety Temperature control	forced air circulation by quite air turbine, adjustable in 10 % steps for each segment individually  Admixture of pre-heated fresh air by electronically adjustable air flap  vent connection with restrictor flap  programme stored in case of power failure  AtmoCONTROL software on a USB stick for programming, managing and transferring programmes via Ethernet interface or USB port  mechanical temperature limiter TB, protection class 1 according to DIN 12880 to switch off the heating approx. 20°C above nominal temperature  overtemperature monitor TWW, protection class 3.1 or adjustable temperature limiter TWB, protection class 2, selectable on display  additionally integrated over- and undertemperature monitor "ASF", automatically following the setpoint value at a preset tolerance range, alarm in case of over- or undertemperature, heating is switched off

## Standard equipment

Works calibration certificate	Calibration at +160°C
Door	fully insulated stainless steel doors with2-point locking (compression door lock)
Internals	2 stainless steel grid(s), electropolished

#### Stainless steel interior

Dimensions	$w_{(A)} \times h_{(B)} \times d_{(C)}$ : 1040 x 720 x 600 mm (d less 39 mm for fan)
Interior	easy-to-clean interior,made of stainless steel, reinforced by deep drawn ribbing with integrated and protected large-area heating on four sides
Volume	449 I
Max. number of internals	8
Max. loading of chamber	300 kg
Max. loading per internal	30 kg

## **Textured stainless steel casing**

Dimensions	w <sub>(D)</sub> x h <sub>(E)</sub> x d <sub>(F)</sub> : 1224 x 1247 x 784 mm (d +56mm door handle)
Installation	on lockable castors
Housing	rear zinc-plated steel

#### **Electrical data**

Voltage	400 V and 3x 230 V w/o neutral, 50/60 Hz approx. 5800 W
Electrical load	

## **Ambient conditions**

Set Up	The distance between the wall and the rear of the appliance must be at least 15 cm. The clearance from the ceiling must not be less than 20 cm and the side clearance from walls or nearby appliances must not be less than 5 cm.
Altitude of installation	max. 2,000 m above sea level
Ambient temperature	+5 °C to +40 °C
Humidity rh	max. 80 %, non-condensing
Overvoltage category	II
Pollution degree	2

## Packing/shipping data

Transport information	The appliances must be transported upright
Customs tariff number	8419 8998
Country of origin	Federal Republic of Germany
WEEE-RegNo.	DE 66812464
Dimensions approx incl. carton	w x h x d: 1330 x 1440 x 1050 mm
Net weight	approx. 161 kg
Gross weight carton	approx. 227 kg

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







