

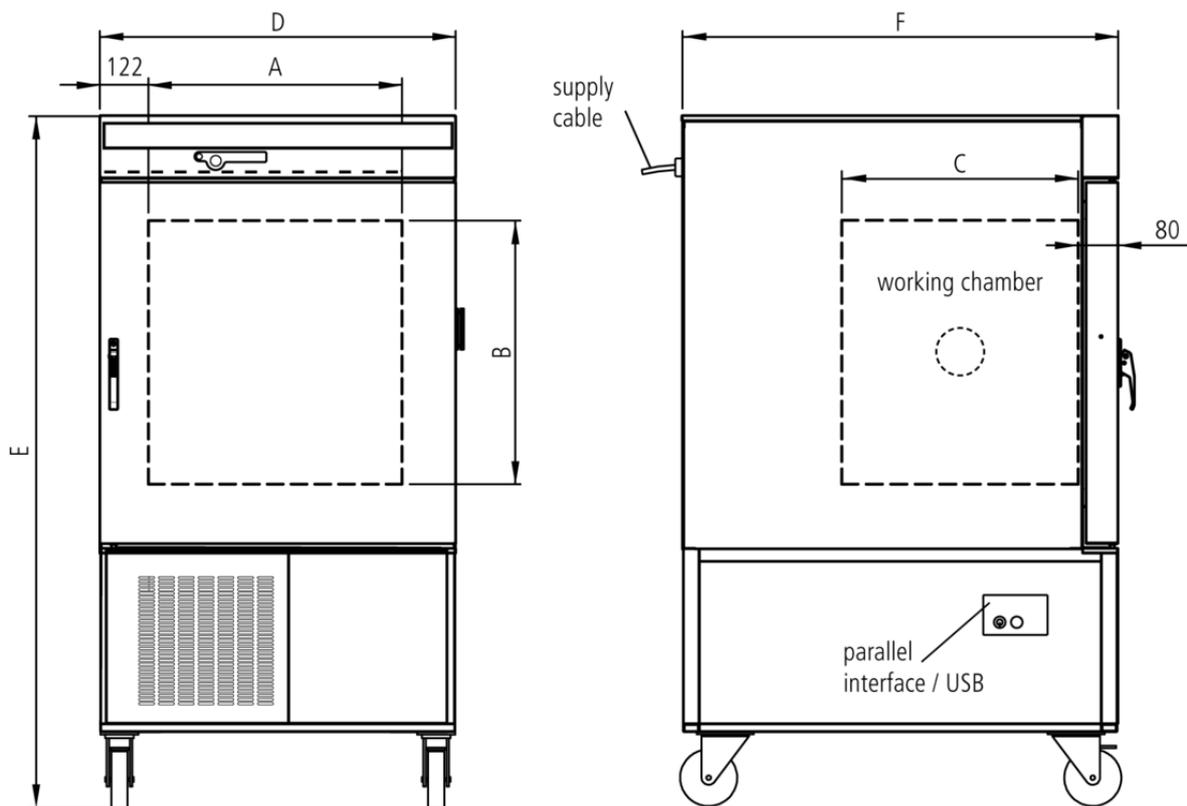
## Environmental test chambers

### TTC256

Memmert environmental test chambers guarantee the perfect atmosphere for climate and temperature tests



On this page, you can find all the essential technical data on the Memmert environmental chamber TTC for climate testing and temperature testing. 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 [sales@memmert.com](mailto:sales@memmert.com).



## Temperature

<b>Temperature range</b>	from -42°C up to +190°C
<b>Setting accuracy temperature</b>	up to 99.9 °C: 0.1 / from 100 °C: 0.5
<b>Temperature distribution (spatial)</b>	+/- 0.5 up to 2K
<b>Temperature sensor</b>	2 Pt100 sensors DIN Class A in 4-wire-circuit for mutual monitoring, taking over functions in case of an error
<b>Display</b>	resolution of display for setpoint values 0.1°C up to 99.9°C, 0.5°C from 100°C and for actual values 0.1°C (LED)

## Control technology

<b>Calibration</b>	three freely selectable temperature values
<b>Controller</b>	Electronic microprocessor temperature controller with auto-diagnostic system
<b>Set-up Display</b>	digital display of all set parameters, such as temperature, weekdays, time, humidity, fan speed, programme status and set-up values - language to be chosen via set-up
<b>Timer</b>	integrated timer for tempering profiles of up to 40 ramps each, each segment adjustable from 1 min. to 999 hrs.

## Ventilation

<b>Fan</b>	high-performance air fan in working chamber
<b>Fan control</b>	depending on operation status automatic adaption of fan speed resp. manual adjustment from 10 to 100 %

## Communication

<b>Interface USB</b>	USB-interface incl. Memmert software "Celsius" for programming and documentation
<b>Interface Printer</b>	parallel printer interface (incl. real time clock with date function) for all PCL3-compatible ink jet printers for GLP-conforming documentation
<b>Documentation</b>	integrated ring memory as data logger for GLP-conforming long-term documentation of all relevant parameters - 1024 kB
<b>Documentation</b>	programme stored in case of power failure
<b>Programming</b>	chip-card control incl. 1 MEMoryCard XL with 32 kB storage capacity (max. 40 ramps)

## Safety

<b>Temperature control</b>	mechanical temperature limiter TB, protection class 1 according to DIN 12880 to switch off the heating approx. 10°C above nominal temperature
<b>Temperature control</b>	over- and undertemperature monitor TWW, protection class 3.3
<b>AutoSAFETY</b>	additionally integrated over- and undertemperature protection "ASF", automatically following the setpoint value at a preset tolerance range, alarm in case of over- or undertemperature, heating is switched off in case of overtemperature, compressor in case of undertemperature
<b>Autodiagnostic system</b>	integral fault diagnostics for temperature control
<b>Alarm</b>	with visual and acoustic alarm in case of over-/under temperature and open door

## Heating concept

Ring heater	high-performance ring heaters with optimised air circulation
Door	door heating to avoid condensation
Cooling	twin compressor; refrigerant R449A

## Standard equipment

Works calibration certificate	standard values -20 °C and +160 °C
Entry port	Entry port right, 80 mm, with stopper
Internals	1 stainless steel grid(s), electropolished
Door	fully insulated stainless steel door with double-locking and 4-point adjustment, heated
Interior	Easy-to-clean stainless steel interior, materil 1.4301 (ASTM 304), hermetically welded

## Stainless steel interior

Volume	256 l
Dimensions	$w_{(A)} \times h_{(B)} \times d_{(C)}$ : 640 x 670 x 597 mm
Max. number of internals	6
Max. loading per internal	25 kg

## Textured stainless steel casing

Dimensions	$w_{(D)} \times h_{(E)} \times d_{(F)}$ : 898 x 1730 x 1100 mm (d +50mm door handle)
Installation	on lockable castors
Housing	rear zinc-plated steel

## Electrical data

Electrical load	400 V, 3ph. w/o N 16A, 50 Hz / approx. 7000 W
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## Ambient conditions

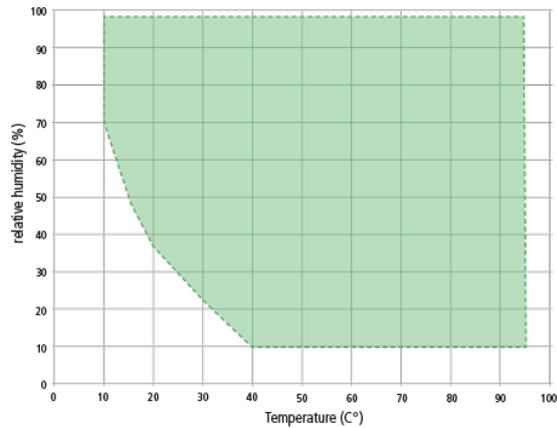
Set Up	The distance between the test chamber and the walls/ceiling must be at least 25 cm.
Ambient temperature	16 °C to 28 °C
Humidity rh	max. 70 %, non-condensing
Altitude of installation	max. 2,000 m above sea level
Pollution degree	2

## Packing/shipping data

<b>Transport information</b>	The appliances must be transported upright
<b>Customs tariff number</b>	8419 8998
<b>Country of origin</b>	Federal Republic of Germany
<b>WEEE-Reg.-No.</b>	DE 66812464
<b>Dimensions approx incl. carton</b>	w x h x d: 1020 x 1910 x 1310 mm
<b>Net weight</b>	approx. 337 kg
<b>Gross weight carton</b>	approx. 463 kg

## Temperature-humidity working range CTC

Not all climate chambers are the same. The humidity content of the chamber load, the ambient conditions and the respective temperature-humidity working range are decisive factors in the selection of the right appliance. In the adjacent diagram, you can see the possible temperature/humidity combinations for our climatic test chamber CTC. Within the respective temperature-humidity range, condensation-free permanent operation is possible. To which extent condensation may occur in the threshold range depends on the humidity content of the chamber load and the ambient conditions.



Temperature-humidity working range CTC

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

