



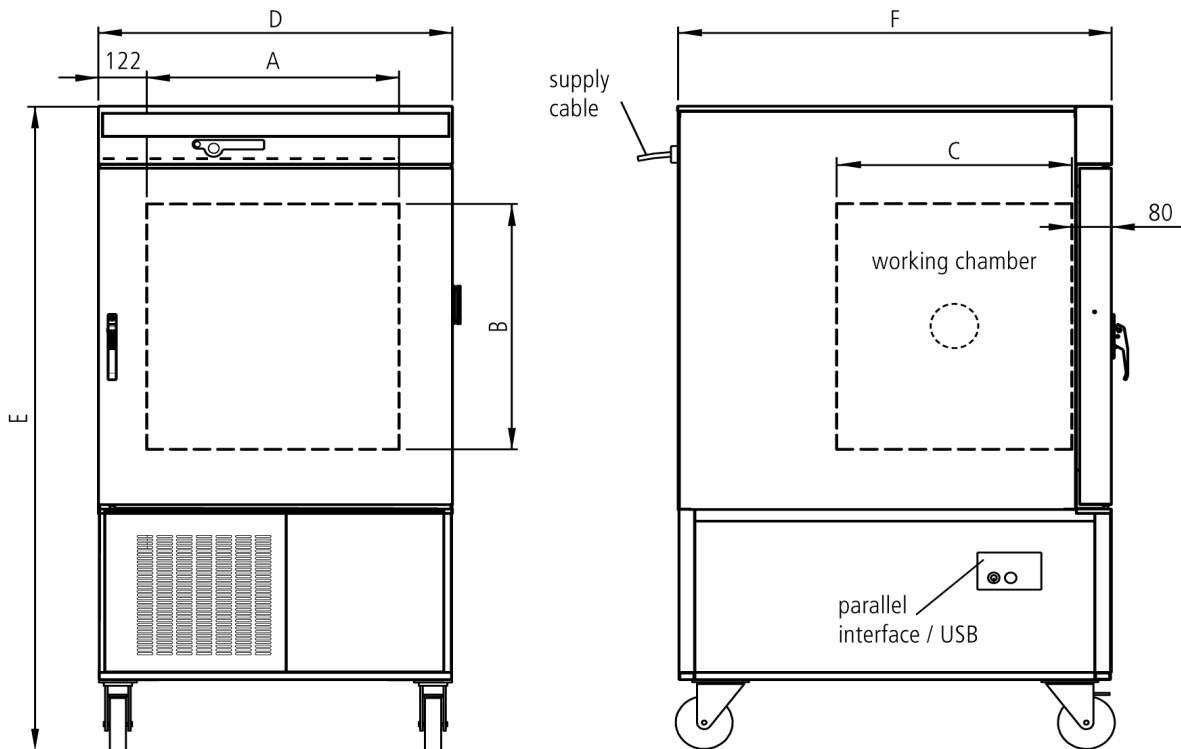
## Environmental test chambers

### 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 CTC/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 [myAtmoSAFE@memmert.com](mailto:myAtmoSAFE@memmert.com).



## Temperature

<b>Temperature range</b>	without humidity from -42°C up to +190°C
<b>Temperature distribution (spatial)</b>	+/- 0.5 up to 2K
<b>Temperature</b>	2 Pt100 sensors Class A in 4-wire-circuit, mutually monitoring and taking over the performance at the same temperature value
<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)

## Humidity

<b>Dehumidification</b>	2 x 10 l tanks as condensate collector
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## Control technology

<b>Controller</b>	Electronic microprocessor temperature controller with auto-diagnostic system
<b>Controller</b>	digital display of all set parameters, such as temperature, weekdays, time, fan speed, air flap position, 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.
<b>Calibration</b>	three freely selectable temperature values

## 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 or adjustable temperature limiter TWB, protection class 2, adjustable at controller
<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; chlorine-free refrigerant R404A

## Standard equipment

**Internals** 1 stainless steel grid(s), electropolished

**Works calibration certificate** standard values +10 °C and +37 °C, 60 % rh at +30 °C

**Door** fully insulated stainless steel door with double-locking and 4-point adjustment, heated

**Interior** easy-to-clean stainless steel interior, material 1.4301 (ASTM 304), hermetically welded

## Stainless steel interior

**Volume** 256 l

**Dimensions W x H x D in mm**  $w_{(A)} \times h_{(B)} \times d_{(C)}$ : 640 x 670 x 597 mm

**Max. number of internals** 6

**Max. loading per internal** 25 kg

## Textured stainless steel casing

**Installation** on lockable castors

**Dimensions**  $w_{(D)} \times h_{(E)} \times d_{(F)}$ : 898 x 1730 x 1100 mm

**Housing** rear zinc-plated steel

## Electrical data

**Electrical load** 400 V, 3 phases, 50/60 Hz / approx. 7000 W

## 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

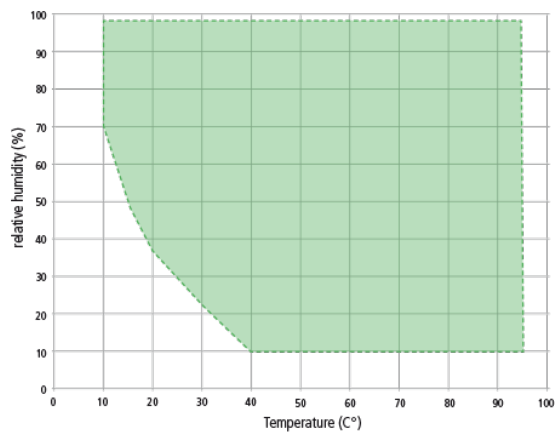
## Packing/shipping data

<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>	B x H x T: 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**

