

**Experts in Thermostatics** 

# **Temperature Test Chamber**

Model TTC256



# Standard equipment

# Ventilation and Control

- high-performance air fan in working chamber
- depending on operation status automatic adaption of fan speed resp. manual adjustment from 10 to 100 %
- adaptive, fuzzy-supported multifunctional digital microprocessor PID-controller
- integral fault diagnostics for temperature control
- 2 Pt100 sensors Class A in 4-wire-circuit, mutually monitoring and taking over the performance at the same temperature value
- digital 7-day programme timer with real time clock, precise minute setting
- integrated timer for tempering profiles of up to 40 ramps each, each segment adjustable from 1 min. to 999 hrs.
- 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
- resolution of display for setpoint values 0.1 ℃ up to 99.9 ℃, 0.5 ℃ from 100 ℃ and for actual values 0.1 ℃ (LED)
- calibration facility through controller for three freely selectable temperature values
- 2 x 10 l tanks as condensate collector
- integrated ring memory as data logger for GLP-conforming long-term documentation of all relevant parameters - 1024 kB
- programme stored in case of power failure

- parallel printer interface (incl. real time clock with date function) for all PCL3-compatible ink jet printers for GLP-conforming documentation
- USB-interface incl. Memmert software "Celsius" for programming and documentation
- chip-card control incl. 1 MEMoryCard XL with 32 kB storage capacity (max. 40 ramps)
- incl. works calibration certificate for -20 ℃ and +160 ℃
- high-performance ring heaters with optimised air circulation
- door heating to avoid condensation

# **Cooling Concept**

- twin compressór
- speed ajdustable condenser fan
- chlorine-free refrigerant R404A

#### **Multiple Overtemperature Protection**

- with audible and visual alarm
- over- and undertemperature monitor TWW, protection class 3.3 or adjustable temperature limiter TWB, protection class 2, adjustable at controller
- with audible and visual alarm in case of over-/under temperature and open door
- additionally integrated over- and undertemperature protection "ASF", automatically following the setpoint value at a preset tolerance range; alarm in case of overor undertemperature, heating is switched off

in case of overtemperature, compressor in case of undertemperature

 mechanical temperature limiter TB, protection class 1 according to DIN 12 880 to switch off the heating approx. 10 °C above nominal temperature

#### **Textured Stainless Steel Casing**

- w x h x d: 898 x 1730 x 1100 mm
- fully insulated stainless steel door with double-locking and 4-point adjustment, heated
- rear zinc-plated steel
- on lockable castors

#### **Interior - Heating Concept**

- w x h x d: 640 x 670 x 597, 256 l
- easy-to-clean stainless steel interior, materil 1.4301 (ASTM 304), hermetically welded
- 1 stainless steel grid

#### Temperature

- without humidity: from -42 ℃ up to +190 ℃
- Average heating up speed 10 K / minute -40 ℃ to +180 ℃
- Average cooling down speed 5 K / minute +190 ℃ to 0 ℃
- Average cooling down speed 3 K / minute +180°C to -40°C
- Heating up time 20 minutes from -40°C up to +180°C (98 % of setpoint)

- Cooling down time 95 minutes from +180°C to -40°C (98 % of setpoint)
- Temperature variation in time +/- 0.2 to 0.5 K
- temperature distribution (spatial) +/- 0.5 up to 2K

## Voltage / Power Rating

• 400 V, 3 phases/N, 50 Hz / approx. 7.000 W

## **Packing Data**

- net weight approx. 297 kg
- gross weight approx. 420 kg
- dimensions approx.: carton w x h x d: 106 x 200 x 130 cm
- the appliances must be transported upright

#### **Customs Tariff Number**

• 8419 8998

# **Country of Origin**

Federal Republic of Germany

#### WEEE-Reg.-No.

DE 66812464