Climate Chamber

Model ICH 256L

Standard equipment

Ventilation and Control

- additional air circulation in the interior adjustable in 10% steps through controller
- no drying-out of the load caused by the cooling device due to separation of thermal jacket from interior (e.g. biological samples)
- adaptive, fuzzy-supported, multifunctional, digital microprocessor PID-controller
- energy-saving use of CFC-free cooling/heating system (refrigerant R134a)
- highly efficient automatic defrosting system
- autodiagnostic system with fault indication
- 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, for one set value or start of ramp operation
- integrated timer for tempering profiles of up to 40 ramps, each segment adjustable from 1 min. up to 999 hours
- multifunctional programming via menu on 8-digit alphanumeric digital display (language to be chosen via set-up):
  tempering profiles of up to 40 ramps
  time- and set-point dependent operation
  speed of mechanical internal air circulation in 10% steps from 10% to 100%
- digital display (LED) of all set parameters, such as temperature, weekdays, time, humidity, fan speed, ramp segments and set-up values
- resolution of display for set value and actual value 0,1 °C
- long-term logging (ring store) of all relevant data, GLP-conforming as data logger - 1024 kB
- programme stored on power failure
- parallel printer interface (incl. real-time clock with date function) for printing logging files, suitable all PCL3-compatible ink-jet printers (USB available via converter, see accessories)
- USB interface including MEMMERT Software "Celsius" for programming and documentation
- chip card control incl. one MEMoryCard XL with 32 kB (up to 40 ramps)
- incl. works calibration certificate for +10 °C and +37 °C as well as 30 °C with 60% rh

Humidifying and dehumidifying system

- active humidifying and dehumidifying from 10-80% rh with digital display of relative humidity - resolution of display: 0,5%, setting accuracy 1%
- humidity supply with distilled water from external tank by self-priming pump
- Humidification by hotsteam generator
- Dehumidification by cold-trap using Peltier technology

Multiple Overtemperature Protection

- with audible and visual alarm
- independently working, digitally adjustable electronic microprocessor overtemperature controller TWW protection class 3.3 maximum value for overtemperature, minimum value for undertemperature
- additional integral over- and undertemperature protection "ASF" (Auto-Safety-Function) automatically following the set value at a preset tolerance range; audible alarm is activated in case of over- or undertemperature, heating is switched off in case of overtemperature, cooling system is switched off in case of undertemperature
- resolution of display and setting accuracy: 0,1 °C
- mechanical temperature limiter TB protection class 1 switching the heating off at approx. 10 °C above max. oven temperature

Textured Stainless Steel Casing

- w x h x d: 958 x 1335 x 656 mm
- fully insulated stainless steel doors with double locking and 4-point adjustment
- inner glass doors
- rear zinc-plated steel
- mounted on lockable castors

Interior - Heating Concept

- w x h x d: 800 x 640 x 500 mm, 256 l
- easy-to-clean interior, made of stainless steel, reinforced by deep drawn ribbing
- air jacket heating system for gentle allaround thermostating
- 2 stainless steel grids

Illumination

- Illumination unit consisting of 4 fluorescent lights with cold white light (standard illuminant D65; 6.500 K) as well as 2 UV lamps in the spectral range of 315-400 nm; light intensity approx. 8000 Lux
- Daylight and UV light can be separately programmed via controller

Light homogeneity

- Cold white light +/- 6%, for UV light +/- 10%

Temperature Range

- from 0 °C up to +60 °C without humidity, from +10 °C up to +60 °C with humidity
- temperature variation in time: < +/-0,3 °C (to DIN 12 880: 2007-05)
- temperature uniformity in chamber at +40°C: < +/- 0.4 °C (to DIN 12 880: 2007-05)

Voltage / Power Rating

- 230 V (+/- 10%), 50/60 Hz
- ca. 1.020 W (during heating)

Packing Data

- net weight approx. 160 kg
- gross weight carton approx. 206 kg
- dimensions approx.:
  carton w x h x d: 108 x 153 x 82 cm
- the appliances must be transported upright

Customs Tariff Number

- 8419 8998

Country of Origin

- Federal Republic of Germany

WEEE-Reg.-No.

- DE 66812464

Accessories

- Alternative illumination boxes (replace the standard lighting; order has to be placed together with the chamber):
  6 fluorescent lights with cold white light (standard illuminant D65, 6.500 K) — T8
- Alternative illumination boxes (replace the standard lighting; order has to be placed together with the chamber):
  6 UV lamps in the spectral range of 315 – 400 nm — T0
- Light intensity measuring via external measuring instrument
- Water connection for external fresh water supply
- Perforated stainless steel shelf — E0(x)
- Stainless Steel Grid — E3(x)
- RS232 interface instead of USB — W6
- Interface Ethernet instead of USB inclusive software "Celsius Ethernet-Edition" — W4
- Parallel/USB converter cable with integrated power supply unit to connect PCL3-compatible HP printers with USB interface to MEMMERT units. — W1
- Documentation package consisting of parallel USB converter cable including PLC3-compatible HP colour inkjet printer with USB interface (HP Deskjet 6980 or successor) for direct connection of printer to Memmert unit — W2
- IQ check list with works test data for oven as support for validation by customer — Q1
- OQ check list including one free-selectable temperature distribution survey to DIN 12880: 2007-05 (size 200/300: 9 measuring points, size 400-800: 27 measuring points) with works test data for oven as support for validation by customer — Q2
- Software conforming to FDA "Celsius FDA-Edition" for up to 16 units — Q3
- Oven-linked authorisation card (User-ID-Card) - prevents undesired manipulation by unauthorised third parties — V1
- Computer interface RS485 (for networking a maximum of 16 ovens) instead of interface USB — V2
- Temperature profile write/read unit for programming via PC, for writing to and reading from the chip card, up to 40 ramps — V3
- Additional chip card, blank, formatted (32 kB MEMoryCard XL for a — V4

maximum of 40 ramps)