Technical data, models and accessories for constant climate chambers HPP (Humidity Peltier-operated Perfect)

according to DIN 12 880: 2007-05
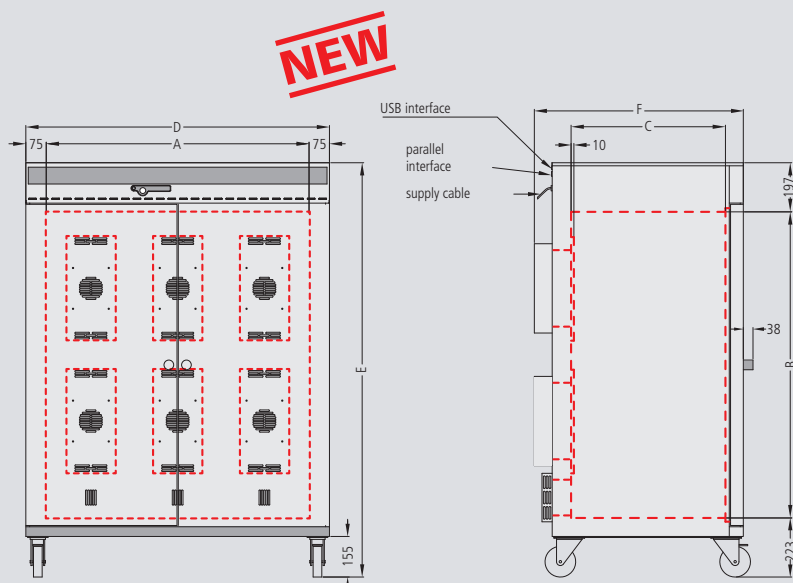
Interfaces:

USB

printer interface

Option (extra cost):

Ethernet LAN

CE

NEW

Dimensions of
constant climate chambers HPP
(see table below)

USB interface
parallel interface
supply cable

Model size				HPP	749 NEW
Stainless steel interior	Volume		approx. l		749
	Width (see sketches above)	(A)	mm		1040
	Height (see sketches above)	(B)	mm		1200
	Depth (see sketches above)	(C)	mm		600
	Provision for sliding stainless steel shelves or wire grid shelves		number		14
Textured stainless steel exterior	Width	(D)	mm		1190
	Height	(E)	mm		1620
	Depth (without door handle, depth of handle 38 mm)	(F)	mm		825
	Extra internal glass door				□
Temperature	Electronic microprocessor temperature controller with Pt100 and auto-diagnostic system				□
	Temperature sensors Pt100 Class A in 4-wire circuit for uninterrupted operation on failure of one Pt100 with warning indication				double
	Temperature range		°C		from +5 up to +70
	Temperature variation in time (to DIN 12 880: 2007-05)		°C		≤ ± 0,15
	Temperature uniformity in chamber at 10 °C and 37 °C (to DIN 12 880: 2007-05)		°C		≤ ± 0,5
Humidity	Capacitive humidity sensor				□
	Active microprocessor control for humidifying and dehumidifying (10 – 90 % rh), incl. digital indication and auto-diagnostic system ensures even more rapid reaching of set humidity and very short recovery times while avoiding condensate formation; humidity supply with distilled water (from an external tank) by a self-priming pump; integral bacteria block by generating hotsteam				□
Monitor	Microprocessor temperature monitor acting as overtemperature protection, with Pt100 incorporating fault diagnostics with visual and acoustic alarm				□
	Digital over- and undertemperature monitor (protection class 3.3)				□
	Temperature monitoring band automatically linked to the setpoint (ASF)				□
	Relay for reliable heating cut-off in case of fault				□
	Acoustic alarm: Over- and undertemperature; over-/underhumidity; empty water tank				□
Timer functions	Real-time/weekly programmer with group function (e.g. Monday-Friday), programme operation with up to 40 ramps for temperature and humidity (MEMoryCard XL)				□
Documentation	Internal log memory 1024 kB as ring memory for all setpoints and actual values of temperature and humidity, errors, settings with real-time and date; capacity approx. 3 months at 1 min. intervals				□
	Parallel printer interface for printing logging files, suitable for all PCL3-compatible ink jet printers (USB available via converter, see accessories)				□
	„Celsius"[1] software for control and documentation of temperature and relative humidity				□
Setup	Calibration (no separate PC required), temperature: 3-point calibration on controller, humidity: 2-point calibration at 20% and 90%				□
	Setting of language for dialogue and display D / UK / E / F / I				□
Further data	Electrical load (during heating and cooling)		approx. W		1050
	Electrical supply 230 V[2] (± 10%), 50/60 Hz		V		230
	Net weight		approx. kg		218
	Gross weight in Triwall carton		approx. kg		278
	Packed dimensions (carton)	width	approx. cm		132
		height	approx. cm		184
		depth	approx. cm		100

Subject to technical modifications

1) MEMMERT "Celsius" software (from version 10.0) has been tested for Windows NT 4, 2000, XP and Vista

2) Option 115 V, 50/60 Hz at extra cost

□ Standard model, basic specification

Model size		HPP	749 NEW
Standard accessories	Stainless steel grids	number	2 ☐
	Wire grid or shelf width (shelves to order)	approx. mm	1036
	Wire grid or shelf depth	approx. mm	530
	Works calibration certificate at 10 °C and 37 °C at 60% rh (test point chamber centre)		☐
Standard version	**Constant climate chamber HPP**		**HPP 749**
Options	Locking door (security lock)		B6
	Stainless steel shelf		E0(x)
	Stainless steel tray (non-perforated) 15 mm rim (may affect the temperature distribution)		E2(x)
	Stainless steel grid		E3(x)
	Moisture-tight entry port[1] for introducing connections <u>at the side,</u> can be closed from inside by silicone stopper, (standard position centre/centre or centre top, 23 mm clear diameter)	left centre/centre left centre top right centre/centre right centre top	F0 F1 F2 F3
	Temperature profile write/read unit for programming via PC with USB interface, 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 maximum of 40 ramps)		V4
	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 USB interface		V2
	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 PCL3-compatible HP colour inkjet printer with USB interface (HP Deskjet 6940 or successor) for direct connection of printer to Memmert unit		W2
	USB connection cable for computer interface		W7
	Flexible Pt100 for positioning in working chamber or in load with socket, 4-pin, according to NAMUR NE 28, for external temperature recording (load temperature)		H4
	Potential-free contact (24 V/2 A) with socket, according to NAMUR NE 28 for external monitoring (indicates when setpoint is reached)		H5
	Ditto, according to NAMUR NE 28 for combination error message (e.g. supply failure, sensor fault, fuse)		H6
	Ditto, triple, for signal generation, controlled by programme segment (using PC) for a total of 3 freely selected functions to be activated (e.g. external acoustic and visual signals, shakers, stirrers, etc.)		H7
	Additional Pt100[1] temperature sensor, positioned flexibly in working chamber or load, for local temperature measurement (up to 3 additional sensors are possible). The measured temperature can, if required, be indicated on the multifunction display, recorded in the integral ring store, and can be documented via the „Celsius"[2] software or on an attached printer During programme operation the additional temperatures of the flexible sensors can, if required, also be employed for the function „setpoint-dependent start of a hold ramp" SPWT (setpoint wait). The subsequent ramp starts only when all the installed sensors have reached the set temperature of the next ramp. Strict adherence to the (minimum) temperature hold times is ensured to a previously unknown perfection by this integration of additional relevant measurements.		H8(x)
	Works calibration certificate for one temperature and humidity according to customer specification		Z4
	IQ check list with works test data for chamber as support for validation by customer		Q1
	OQ-check list with works test data for one freely selectable humidity and temperature value[3] incl. temperature distribution survey for 27 measuring points to DIN 12880-2007:05 as support for validation by customer		Q2
	Software conforming to FDA „Celsius FDA Edition"[4] for up to 16 units. Meets the requirements for the use of electronically stored data sets and electronic signatures as laid down in Regulation 21 CFR Part 11 of the US Food and Drug Administration (FDA) • storage of setpoint profiles and documentation data protected against manipulation • user identification with password protection • control of access authorisation of individual users through the administrator • traceability through protected audit trail file • protection against and registration of unauthorised access and manipulation attempts • unique assignment of documentation data through linkage with serial number • use of optional User-ID-Card is recorded in the documentation data		Q3
	Integration of additional units (up to max. 16 units) into an already existent FDA-software licence		Q4

Subject to technical modifications

1) Special equipment requires 20% payment in advance of apparatus price
2) MEMMERT "Celsius" software (from version 10.0) has been tested for Windows NT 4, 2000, XP and Vista
3) Additional temperature and humidity values at extra cost for each additional value
4) Requires Windows 2000 Professional or XP Professional

☐ Standard model, basic specification
(x) Please specify quantity required after order number