

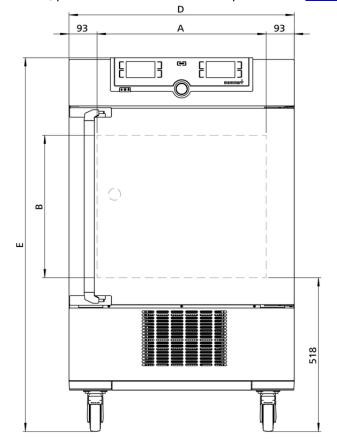
## Climate chamber

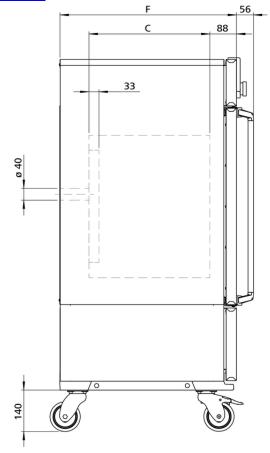
# **ICH110**

Unparalleled homogeneity of temperature and humidity. For stability testing according to ICH - WHO - EMA - ASEAN - GMP - GLP – GCCP.



On this page, you can find all the essential technical data on the Memmert climate chamber ICH. 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 <a href="mailto:sales@memmert.com">sales@memmert.com</a>.





Temperature	
Setting temperature range	-10 to +60 °C
Working temperature range	from -10°C up to +60°C without humidity(not suitable for long-term storing at sub-zero temperatures. During permanent operation, the glass door may ice over)
Working temperature range	from +10°C up to +60°C with humidity and/or light
Setting accuracy temperature	0.1 °C
Temperature sensor	2 Pt100 sensors DIN Class A in 4-wire-circuit for mutual monitoring, taking over functions in case of arerror
Humidity	
Humidity	humidity supply with distilled water from external tank by self-priming pump
Humidification	humidification by hot steam generator
Humidity	active humidifying and de-humidifying adjustable from 10-80 % rh with digital display of relative humidity - resolution of display 0.1 %, setting accuracy 0.5 %
Control technology	
ControlCOCKPIT	TwinDISPLAY. Adaptive multifunctional digital PID-microprocessor controller with 2 high-definition TFT-colour displays.
adjustable parameters	temperature (Celsius or Fahrenheit), fan speed, relative humidity, programme time, time zones, summertime/wintertime
Language setting	German, English, Spanish, French, Polish, Czech, Hungarian
Timer	Digital backwards counter with target time setting, adjustable from 1 minute to 99 days
Function SetpointWAIT	the process time does not start until the set temperature is reached
Calibration	three freely selectable values each, temperature/humidity/CO <sub>2</sub>
Ventilation	
Fan	forced air circulation in working chamber adjustable from 10 to 100 % in 10 % steps
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Communication	
Documentation	programme stored in case of power failure
Programming	AtmoCONTROL software on a USB stick for programming, managing and transferring programmes via Ethernet interface or USB port
Safety	
Safety Temperature control	mechanical temperature limiter TB, protection class 1 according to DIN 12880 to switch off the heating approx. 10°C above nominal temperature
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Temperature control	approx. 10°C above nominal temperature  over- and undertemperature monitor TWW, protection class 3.3 or adjustable temperature limiter

visual and acoustic

Alarm

Heating concept
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Air jacket	air jacket heating system for gentle all-around heating
Heating concept	no drying-up of the load caused by the cooling device due to separation of thermal jacket from interior
Cooling	energy-saving use of CFC-free cooling/heating system (refrigerant R134a)
Defrosting	highly efficient automatic defrosting system

# Standard equipment

Entry port	Entry port (silicone), 40 mm clear diameter, moisture tight, can be closedby a silicone stopper, standard position at the back
Door	fully insulated stainless steel door with 2-point locking (compression door lock)
Internals	2 stainless steel grid(s), electropolished
Works calibration certificate	standard values +10 °C and +37 °C, 60 % rh at +30 °C
Door	inner glass door

## Stainless steel interior

Dimensions	$w_{(A)} \times h_{(B)} \times d_{(C)}$ : 560 x 480 x 400 mm (d less 33 mm for fan)
Volume	108 I
Max. number of internals	5
Max. loading of chamber	150 kg
Max. loading per internal	20 kg

## Textured stainless steel casing

Dimensions	w <sub>(D)</sub> x h <sub>(E)</sub> x d <sub>(F)</sub> : 745 x 1233 x 585 mm (d +56mm door handle)
Installation	on lockable castors
Housing	rear zinc-plated steel

## **Electrical data**

Voltage	230 V, 50 Hz
Electrical load	approx. 1350 W
Voltage	115 V, 50/60 Hz
Electrical load	approx. 1350 W

## **Ambient conditions**

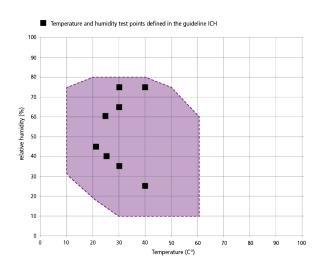
Set Up	The distance between the wall and the rear of the appliance must be at least 15 cm. The clearance from the ceiling must not be less than 20 cm and the side clearance from walls or nearby appliances must not be less than 5 cm.
Ambient temperature	15 °C to 28 °C (up to 34 °C with limited temperaturerange)
Humidity rh	max. 70 %, non-condensing
Altitude of installation	max. 2,000 m above sea level
Overvoltage category	II
Pollution degree	2

### Packing/shipping data

Transport information	The appliances must be transported upright
Customs tariff number	8419 8998
Country of origin	Federal Republic of Germany
WEEE-RegNo.	DE 66812464
Dimensions approx incl. carton	w x h x d: 880 x 1410 x 810 mm
Net weight	approx. 109 kg
Gross weight carton	approx. 137 kg

## Temperature-humidity working range ICHeco

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 climate chamber ICHeco. 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 ICHeco/ICH

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

