Constant climate chamber

ZF series

The ZF series constant climate chambers are the specialist for reliable stability testing and precise maintenance of constant climatic conditions. From programming to documentation, it meets all important guidelines such as ICH, FDA, GMP and GLP. With its high capacity reserves, automatic water and wastewater management and many options, the FG ZF series is well prepared for the future.

- ZF240
- ZF400

Temperature
Humidity

HCT

Flexible water management with anti-polar technology

- Water sensor protection thanks to anti-polar technology
- Solution independent of installation sight
- Pump for discharges up to 1m in height
- Electric sensor for adjust water surface
- External water supply

ARM series Microcontroller

- Temperature/Humidity/Light/Fan speed and all events recorder up to 5 years
- RS485 interfaces for connecting to computer, using FGLAB software
- Controller which can store 25 programs of 100 steps
- 6 points user friendly temperature calibration
- 2 points user friendly humidity calibration
- Color graphic LCD display with touch key
- IOT functions

Ultra safe

- Independent adjustable temperature safety device class 3.3 (according to DIN 12880), with visual temperature alarm(TWW)
- Temp and humidity sensor fail alarm
- Over flow and water outage alarm
- Automatic temperature monitor
- Central troubleshooting system
- Power cutting visual alarm
- SMS alarm

Unique Humidification System

- Vapor pressure humidification with fast response time
- Short recovery times after door opening
- Drift-free, capacitive humidity sensor
- Finely adjustable humidity control

NON CUT

NON CUT

- Powerful cooling system for safe operation up to 32°C ambient temperature
- Triple evaporator
- Frost-free

Constant Climate Chamber
Main Features

- Electronically controlled humidification and dehumidification's system with capacitive humidity sensors
- Independent temperature safety device class 3.3(DIN 12880)with visual and   audible alarm
- Suitable for stability tests according to ICH guideline Q1A(R2)
- Very tight door closure with 2-point door latch
- User- friendly LCD color screen with touch key
- Automatic temperature monitor
- Two shelves stainless steel
- Inner glass door with seal
- Adjustable fan speed
- Real-time clock
- With castors

HCT

NON CUT

ZF series

Special Benefits

ARM series microcontroller
- Temperature/humidity /fan speed and all events recorder up to 5 years
- RS 485 interfaces for connecting a PC, using FG lab software
- Controller which can store 25 programs of 100 steps
- Documentation in support of GMP/GLP compliance
- 6 points user temperature calibration
- Double PT100 temperature sensor
- 2 points user humidity calibration
- PID controller with high accuracy
- USB flash memory connection
- Weekly program
- Lock functions
- IOT functions
- SMS alarm

Precise climate conditions with HCT technology
- Constant and gentle circulation of air through large-surface side walls even under full load
- Homogeneous climate conditions throughout Tests specimens thanks to triple panel

Unique humidification system
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- Short recovery times after door opening
- Drift-free , capacitive humidity sensor
- Finely adjustable humidity control

NON CUT technology
- Powerful cooling system for safe operation up 32°C ambient temperature
- Triple evaporator
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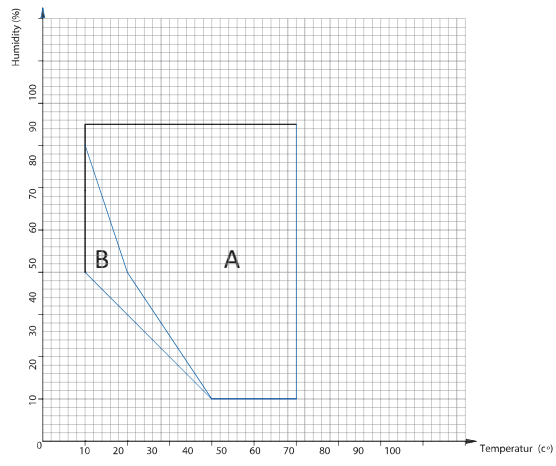
Constant Climate Chamber

Specifications

Extrior dimensions	ZF240	ZF400
Width (cm)	90	94
Height (incl. feet) (cm)	140	190
Depth (cm)	75	80
Depth Plus controller, door handle (cm)	82	87
Number of doors	1	1
Glass door	1	1
Wall clearance, rear(cm)	15	15
Wall clearance, side(cm)	15	15
Interior dimensions	ZF240	ZF400
Width (cm)	67	70
Height (cm)	81	120
Depth (cm)	45	49
Interior volume (L)	245	410
Racks (number standard/max.)	2/5	2/6
Load per rack (Kg)	5	5
Permitted total load (Kg)	30	30
Weight (empty)(Kg)	200	270
Climatic data	ZF240	ZF400
Temperature range without humidity(∘C)	0-60	0-60
Temperature range with humidity(∘C)	10-60	10 -60
Temperature uniformity @ 25∘C with humidity(±K)	1	1
Temperature fluctuation @25∘C with humidity (±K)	0.2	0.2
Temperature uniformity @ 40∘C with humidity (±K)	1	1
Temperature fluctuation @ 40∘C with humidity (±K)	0.2	0.2
Temperature uniformity @ 25∘C without humidity(±K)	0.5	0.5
Temperature fluctuation @25∘C without humidity (±K)	0.1	0.1
Temperature uniformity @ 40∘C without humidity (±K)	0.5	0.5
Temperature fluctuation @ 40∘C without humidity (±K)	0.2	0.1
Humidity range (%r. H.)	10-80	10-80

Humidity fluctuation (%r. H.)	3	3
Recovery time after door were open for 30 sec @ 25◦C and 60%r.H. with illumination(min) *	10	10
Electrical data	**ZF240**	**ZF400**
Voltage (V AC)	220	220
Power (W)	3000	4000
Frequency (Hz)	50	50
Current (A)	14	18.5

Temperature-humidity chart

A: Guaranteed condensation free
B: Time limited operation (max 24hours)

* To 98% of the set value
• All technical data are specified for units with standard equipment at an ambient temperature of 25 °C and a line voltage fluctuation of ±10%
• There are some limits for set humidity and temperature, please see the Temperature-humidity chart