



**Best Technology**  
For Your Laboratory

**STABILITY TEST CHAMBER**

# STABILITY TEST CHAMBER

## ZF400



## Overview | ZF400

ZF is 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, 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.

This device is used in a variety of industrial, pharmaceutical and research laboratories

## Main features | ZF400

Suitable for stability tests according to ICH guideline Q1A (R2)

User- friendly LCD color screen with touch key

Very tight door closure with 2-point door latch

Special design to prevent glass steam

4 CASTERS (2 Fronts caster with brake)

Automatic temperature monitor

Two stainless steel shelves

Inner glass door

Real-time clock

Circulation fan

## Special benefits | ZF400

### HCT (Homogenic chamber technology)

Temperature and humidity stability and reproducibility

Uniform circulation even under full load

Short warm-up time

Short recovery time

Triple-walled

### DUAL SAFETY

Class 3.3 independent temperature safety device (DIN12880) (TWW)

Class 3.1 independent temperature safety device (DIN12880) (TWB)

Audible and Visual alarm

### NON-CUT technology

Powerful cooling system for safe operation up 30°C ambient temperature

Dual evaporator

Frost-free

## Special benefits | ZF400

### Flexible water management with anti-polar technology

Water sensor protection thanks to anti-polar technology

Electric sensor for adjust water surface

Prevent water deposition on sensors

### Unique humidification system

Vapor pressure humidification with fast response time

Solution independent of installation sight

Pump for discharges up to 1 m in height

Short recovery times after door opening

Drift-free, capacitive humidity sensor

Finely adjustable humidity control

External water supply

## Special benefits | ZF400

### ARM series micro controller

Save temperature, humidity, fan speed and all events up to 5 years

Controller which can store 3 programs of 100 steps

6 points user temperature calibration

Double PT100 temperature sensor

2 points user humidity calibration

PID controller with high accuracy

7"Color graphic TFT LCD

Capacitive touch key

Lock functions

### DOCUMENTATION

Internal memory for temperature, humidity, fan speed logs up to two years

Ethernet (LAN) interface for connecting to PC, using FG lab software

Documentation in support of GMP/GLP compliance

### STM (smart temperature monitor)

Alarm for temperature and humidity

Audible and visual alarm

Door open alarm

SMS alarm

## Specifications | ZF400

### Exterior dimensions

Depth water supply, door handle (cm)	95
Height (incl. feet) (cm)	204
Width (cm)	90
Number of doors	1
Depth plus controller (cm)	75
Number of glass door	1

### Exterior dimensions

Interior volume (L)	400
Racks (number standard-max.)	2-15
Permitted total load (Kg)	35
Load per rack (Kg)	5
Weight (empty) (Kg)	220
Depth (cm)	45.5
Width (cm)	66
Height (cm)	137

## Specifications | ZF400

### Climatic data

Temperature uniformity @ 25°C without humidity ( $\pm K$ )	$\pm 1$
Temperature fluctuation @ 25°C without humidity ( $\pm K$ )	$\pm 0.7$
Temperature uniformity @ 40°C without humidity ( $\pm K$ )	$\pm 1$
Temperature fluctuation @ 40°C without humidity ( $\pm K$ )	$\pm 0.6$
Temperature uniformity @ 25°C with humidity ( $\pm K$ )	$\pm 1$
Temperature fluctuation @ 25°C with humidity ( $\pm K$ )	$\pm 1$
Temperature uniformity @ 40°C with humidity ( $\pm K$ )	$\pm 1.5$
Temperature fluctuation @ 40°C with humidity ( $\pm K$ )	$\pm 1$
Recovery time after door were open for 30 sec @ 25(°C) and 60% RH with illumination(min)	10
Temperature range without humidity (°C)	0-60
Temperature range with humidity (°C)	10-60
Humidity range (%RH)	30-90
Humidity fluctuation (%RH)	$\pm 5$



## Specifications | ZF400

### Installation conditions

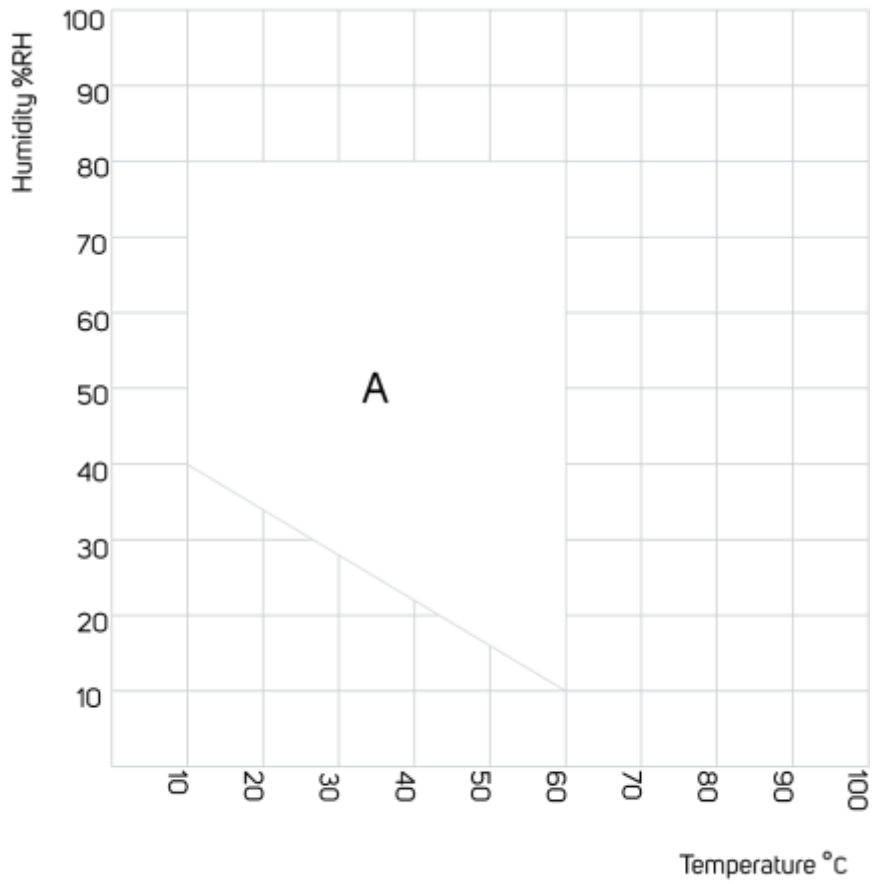
Wall clearance, rear (cm)	20
Wall clearance, side (cm)	15
Wall clearance, above (cm)	40
Maximum ambient temperature (°C)	+26
Minimum ambient temperature (°C)	+16
Maximum ambient humidity (%RH)	70

### Electrical data

Power (W)	3300
Frequency (HZ)	50
Voltage (V AC)	220
Current (A)	15

\* To 98% of 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  $\pm 10$
- There are some limits for set humidity and temperature, please see the temperature-humidity chart.



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

Temperature -humidity chart

Other temperature-humidity values may be possible by order

## Options and accessories | ZF400

Access port with silicone plug



Qualification folder IQ/OQ/PQ



Additional stainless steel rack



Calibration certificate



Door lock





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