

# test chambers

Climatic Test Chambers  
Stability Test Chambers  
Growth Test Chambers



FALC INSTRUMENTS SRL





## TEST CHAMBERS

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Vertical Airflow
  
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## CLIMATIC TEST CHAMBERS

### CLIMATIC TEST CHAMBERS - VERTICAL AIRFLOW

- Without humidity (FCC Series)
- With humidity (FCC-H Series)

## STABILITY TEST CHAMBERS

### STABILITY TEST CHAMBERS - HORIZONTAL AIRFLOW

- Without humidity
  - FSC Series
  - FSC For ICH Test Series
- With humidity
  - FSC-H Series
  - FSC-H For ICH Test Series

## FORCED AIR GROWTH TEST CHAMBERS

### GROWTH TEST CHAMBERS - VERTICAL AIRFLOW

- Without humidity
  - Light on the door (GVD Series)
  - Lights on the door and two sides (GVS Series)
- With humidity
  - Light on the door (GVD-H Series)
  - Lights on the door and two sides (GVS-H Series)

### GROWTH TEST CHAMBERS - HORIZONTAL AIRFLOW

- Without humidity
  - Light on the door (GHD Series)
  - Lights on the door and back sides (GHS Series)
- With humidity
  - Light on the door (GHD-H Series)
  - Lights on the door and back sides (GHS-H Series)



## CLIMATIC TEST CHAMBERS

- 6 ■ CLIMATIC TEST CHAMBERS
- 6 | Climatic Chambers with and without humidity control  
Vertical Airflow





# CLIMATIC TEST CHAMBERS

Climatic Chambers with and without humidity control - Vertical Airflow



500 - 700 - 940 lt Capacity

+4° to +60°C  
20% to 90% RH

Optionally  
-10°/-20°/-30°C  
to +60°C  
without humidity  
control



## FIELDS OF APPLICATION:

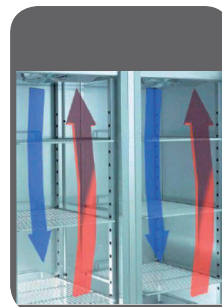
- Food industry
- Confectionary industry
- Laboratory testing
- Analytical laboratory
- Pharmaceutical industry
- Quality test
- Environmental test
- Construction materials industry
- Calibration laboratory
- Biotechnology
- Textile industry
- Automotive industry
- Electronic industry
- Plastic industry



350 lt Capacity



1500 - 2200 lt Capacity



## CLIMATIC TEST CHAMBERS

VERTICAL AIRFLOW	Without Humidity	FCC
	With Humidity	FCC-H

# CLIMATIC TEST CHAMBERS

## Climatic Chambers with and without humidity control - Vertical Airflow

### STANDARD FEATURES



- Cooling system controller by solenoid electrovalves
- Adjustable safety thermostat to protect the samples
- System setting protected by password
- Key lock on the door



- Temperature range from +4°C to +60°C (optionally from -10°/-20°/-30°C to +60°C without humidity control)
- Models include forced air refrigeration (distributed uniformly vertically), and have high temperature homogeneity inside of the chamber
- Ultrasound humidity generator, introducing microscopic water drops inside of the chamber at room temperature (electrode system optionally)
- Condensation drying system by cooling
- Independent cooling and heating systems
- Tropicalization treatment, to allow work up to +32°C room temperature



- Internal glass door, with hermetic closing (models up to -10°/-20°/-30°C do not include internal glass door)
- Solid external door with opening aids and big sized handle (double glass door optionally)
- Hermetic compressor built over dampers to reduce noise levels
- AISI 304 stainless steel internal finish
- Epoxy coated steel external finish
- Rounded corners for easy cleaning
- Heated door frame, to ensure an ice free door closing for models up to -10°/-20°/-30°C
- Access port to introduce cables and probes



- USB port to store system data.
- High density of 60 mm polyurethane insulation (CFC and HCFC free) high density polyurethane
- (CFC and HCFC free) biodegradable cooling gas
- Magnetic gasket on the external door, to ensure a better door closing.
- Access port, to introduce cables and external instruments
- 4 wheels for easy movement with height-adjustable feet
- Height-adjustable perforated stainless steel shelves.



- Including touchscreen controller, with graphic representation
- Work cycles programming
- Control system with battery backup and automatic recharge, for up to 48h
- The controller stores the max/min temperature and/or humidity values with their graphical representation.
- Audible and visible independent alarms for maximum and minimum temperature, with NiCd battery support backup for more than 48h of battery life (72h optionally)
- PC software
- Ethernet output

#### For models with and without humidity control

##### FCC/FCC-H

reference temperature 37°C

Temperature range	+4°C to +60°C (optionally from -10°/-20°/-30°C to +60°C without humidity control)
Accuracy of display	+/-0.1 °C
Homogeneity of temperature	+/-1.5 °C
Stability of temperature	+/-0.75 °C
Accuracy of NTB probe	+/-0.15 °C



Touchscreen controller included

#### Only for models with humidity control

##### FCC-H

reference temperature 37°C

Humidity control	20% to 90% RH
Temperature Range	+19°C to +40°C
Accuracy Humidity control	+/-3% RH
Electronic humidity probe	4-20mA
Accuracy Electronic humidity control	+/-2% RH
Homogeneity of temperature	+/-1.5°C

### ACCESSORIES



20 l tank in plastic HDPE with faucet  
Code 636.0700.31

# CLIMATIC TEST CHAMBERS

Climatic Chambers with and without humidity control - Vertical Airflow



350 lt Capacity



500 - 700 - 940 lt Capacity



1500 - 2200 lt Capacity

		FCC/FCC-H 350	FCC/FCC-H 500	FCC/FCC-H 700	FCC/FCC-H 940	FCC/FCC-H 1500	FCC/FCC-H 2200
Capacity	Lt	350	500	700	940	1500	2200
Nr of shelves		2	3	4	4	4+4	4+4
Nr max of shelves		4	6	8	8	8+8	8+8
Nr of doors		1	1	1	1	2	2
Compressor RH		1/2	3/8	3/8	3/8	3/8	3/8
Usable Internal Dimensions (WxDxH)	mm	820x540x660	740x540x1200	740x540x1350	990x590x1350	1590x540x1350	1590x840x1350
External dimensions (WxDxH)	mm	925x800x1140	850x800x1730	850x800x1980	1100x850x1980	1700x800x1980	1700x1100x1980
<b>Climatic Chamber - Vert. Airflow without Humidity FCC</b>		<b>701.1100.01</b>	<b>701.1100.02</b>	<b>701.1100.03</b>	<b>701.1100.04</b>	<b>701.1100.05</b>	<b>701.1100.06</b>
<b>Climatic Chamber - Vert. Airflow with Humidity FCC-H</b>		<b>701.1101.01</b>	<b>701.1101.02</b>	<b>701.1101.03</b>	<b>701.1101.04</b>	<b>701.1101.05</b>	<b>701.1101.06</b>

V/HZ 220/240 - 50



# CLIMATIC TEST CHAMBERS

Climatic Chambers with and without humidity control - Vertical Airflow

## OPTIONAL ACCESSORIES



- Temperature range from +4°C to +60°C (optionally from -10/-20/-30°C to +60°C without humidity control)
- Humidity generator up to +95°C RH
- Air drying system up to 15% RH at +4°C



- Additional access ports to introduce cables and probes
- Thermal glass door, with heated frame in models with humidity control or lower temperatures
- External stainless steel finish
- Plugs inside of the chamber



- Potential free output for remote alarm control
- UV light tubes for sterilization
- Telescopic trays to locate instruments
- Printer for temperature and humidity data



- GSM phone alarm module
- Battery backup



500 - 700 - 940 lt Capacity  
with glass door (optional)

# HOW TO CONFIGURE FALC CLIMATIC TEST CHAMBERS

**Falc Test Chambers** are suitable for creating environmental conditions to test samples by combining three variables: temperature, humidity and lights. Considering the many combinations of these variables, we suggest you to directly configure the instrument with the manufacturer, providing all the necessary information, including the application and the mode of use.

The temperature and the humidity of both **Climatic Chambers** and **Stability Chambers** need a close attention: Just as the temperature can reach -30 °C, requiring a specific refrigeration system, humidity can also have peaks of up to 10% RH or even 95% RH.

Applications in climatic chambers include *resistance testing of components in the automotive industry* and *resistance testing of materials*, including *metals, plastics and cements* (ASTM Regulation).

An example of material testing are *frost and thaw tests* that allow to study how building materials react in certain weather conditions, replicating the icy winters of Siberia, the drought of the Arab deserts or the rains. In this specific application, the concrete samples are subjected to cycles of very low and then higher temperatures to simulate the real atmospheric conditions of their future life cycle, so that we can evaluate their performance under stress.

Obviously, the Test Chambers configuration strictly depends on what must be tested and the conditions to simulate; so, it is essential to design the chamber with our technical team who will support you in choosing the suitable accessories and in customizing the machine in accordance with your needs.



## STABILITY TEST CHAMBERS

- 12 ■ STABILITY TEST CHAMBERS
- 12 | Stability Chambers with and without humidity control  
Horizontal Airflow
- 12 | Stability Chambers with and without humidity control  
Horizontal Airflow for ICH Test



# STABILITY TEST CHAMBERS

## Stability Chambers with and without humidity control - Horizontal Airflow



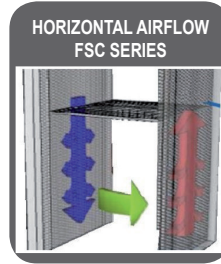
**+4° to +60°C**  
**20% to 90% RH**

**Optionally**  
**-10°/-20°/-30°C**  
**to +60°C**  
**without humidity control**



### FIELDS OF APPLICATION:

- Laboratory testing
- Quality test
- Chemical industry
- Environmental test
- Food industry



Touchscreen controller included

## Stability Chambers with and without humidity control - Horizontal Airflow for ICH Test



**Long term testing at**  
**+25°C / 60% RH**  
**or +30°C / 65% RH**

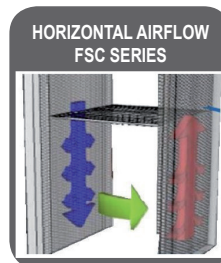
**Accelerated testing at +40°C**  
**/ 75% rh**

**Intermediate testing at**  
**+30°C / 65% RH**



### FIELDS OF APPLICATION:

- Pharmaceutical industry with ICH test
- Laboratory testing
- Quality test
- Chemical industry
- Environmental test
- Food industry
- Cosmetic industry



ICH NANODAC Controller included

STABILITY TEST CHAMBERS		For general applications	For ICH Test
HORIZONTAL AIRFLOW	Without Humidity	FSC	FSC for ICH Test
	With Humidity	FSC-H	FSC-H for ICH test

# STABILITY TEST CHAMBERS

## Stability Chambers with and without humidity control - Horizontal Airflow

### STANDARD FEATURES



- Cooling system controller by solenoid electrovalves
- Adjustable safety thermostat to protect the samples
- System setting protected by password
- Key lock on the door



- Temperature range from +4°C to +60°C (optionally from -10°/-20°/-30°C to +60°C without humidity control)
- Models include forced air refrigeration (distributed uniformly vertically), and have high temperature homogeneity inside of the chamber
- Ultrasound humidity generator, introducing microscopic water drops inside of the chamber at room temperature (electrode system optionally)
- Condensation drying system by cooling
- Independent cooling and heating systems
- Tropicalization treatment, to allow work up to +32°C room temperature



- Internal glass door, with hermetic closing (models up to -10°/-20°/-30°C do not include internal glass door)
- Solid external door with opening aids and big sized handle (double glass door optionally)
- Hermetic compressor built over dampers to reduce noise levels
- AISI 304 stainless steel internal finish
- Epoxy coated steel external finish
- Rounded corners for easy cleaning
- Heated door frame, to ensure an ice free door closing for models up to -10°/-20°/-30°C
- Access port to introduce cables and probes



- USB port to store system data.
- High density of 60 mm polyurethane insulation (CFC and HCFC free) high density polyurethane
- R404 (CFC and HCFC free) biodegradable cooling gas
- Magnetic gasket on the external door, to ensure a better door closing.
- Access port, to introduce cables and external instruments
- 4 wheels for easy movement with height-adjustable feet
- Height-adjustable perforated stainless steel shelves.



- Including touchscreen controller, with graphic representation
- Work cycles programming
- Control system with battery backup and automatic recharge, for up to 48h
- The controller stores the max/min temperature and/or humidity values with their graphical representation.
- Audible and visible independent alarms for maximum and minimum temperature, with NiCd battery support backup for more than 48h of battery life (72h optionally)
- PC software
- Ethernet output



**ICH NANODAC**  
Controller included



Touchscreen controller included

For models with and without humidity control

#### FSC/FSC-H

#### FSC/FSC-H for ICH Test

	reference temperature 37°C
Temperature range	+4°C to +60°C (optionally from -10°/-20°/-30°C to +60°C without humidity control)
Accuracy of display	+/-0.1 °C
Homogeneity of temperature	+/-1.0 °C
Stability of temperature	+/-0.5 °C
Accuracy of NTB probe	+/-0.15 °C

Only for models with humidity control

#### FSC-H for ICH Test/FSC-H

	reference temperature 37°C
Humidity control	20% to 90% RH
Temperature Range	+19°C to +40°C
Accuracy Humidity control	+/-3% RH
Electronic humidity probe	4-20mA
Accuracy Electronic humidity control	+/-2% RH (1.0% Optionally)
Homogeneity of temperature	+/-1.5°C

### ACCESSORIES



20 lt tank in plastic HDPE with faucet  
Code 636.0700.31



# STABILITY TEST CHAMBERS

Stability Chambers with and without humidity control - Horizontal Airflow



350 Lt Capacity



500 - 700 - 940 Lt Capacity



1500 - 2200 Lt Capacity

		FSC/FSC-H FSC/FSC-H for ICH Test	FSC/FSC-H FSC/FSC-H for ICH Test	FSC/FSC-H FSC/FSC-H for ICH Test	FSC/FSC-H FSC/FSC-H for ICH Test	FSC/FSC-H FSC/FSC-H for ICH Test	FSC/FSC-H FSC/FSC-H for ICH Test
		350	500	700	940	1500	2200
Capacity	Lt	350	500	700	940	1500	2200
Nr of shelves		2	3	4	4	4+4	4+4
Nr max of shelves		4	6	8	8	8+8	8+8
Nr of doors		1	1	1	1	2	2
Compressor RH		1/2	3/8	3/8	3/8	3/8	3/8
Usable dimensions (WxDxH)	mm	820x540x660	640x600x1100	640x600x1350	640x890x1350	1500x600x1350	1500x890x1350
External dimensions (WxDxH)	mm	925x800x1140	850x800x1730	850x800x1980	850x1100x1980	1700x800x1980	1700x1100x1980
<b>Stability Chamber - Horiz. Airflow without Humidity FSC</b>		<b>701.1200.01</b>	<b>701.1200.02</b>	<b>701.1200.03</b>	<b>701.1200.04</b>	<b>701.1200.05</b>	<b>701.1200.06</b>
<b>Stability Chamber - Horiz. Airflow with Humidity FSC-H</b>		<b>701.1201.01</b>	<b>701.1201.02</b>	<b>701.1201.03</b>	<b>701.1201.04</b>	<b>701.1201.05</b>	<b>701.1201.06</b>
<b>Stability Chamber - Horiz. Airflow without Humidity FSC for ICH</b>		<b>701.1200.11</b>	<b>701.1200.12</b>	<b>701.1200.13</b>	<b>701.1200.14</b>	<b>701.1200.15</b>	<b>701.1200.16</b>
<b>Stability Chamber - Horiz. Airflow with Humidity FSC-H for ICH</b>		<b>701.1201.11</b>	<b>701.1201.12</b>	<b>701.1201.13</b>	<b>701.1201.14</b>	<b>701.1201.15</b>	<b>701.1201.16</b>

V/HZ 220/240 - 50

# STABILITY TEST CHAMBERS

Stability Chambers with and without humidity control - Horizontal Airflow

## OPTIONAL ACCESSORIES



- Temperature range from +4°C to +60°C (optionally from -10/-20/-30°C to +60°C without humidity control)
- Humidity generator up to +95°C RH
- Air drying system up to 15% RH at +4°C



- Additional access ports to introduce cables and probes
- Thermal glass door, with heated frame in models with humidity control or lower temperatures
- External stainless steel finish
- Plugs inside of the chamber



- Potential free output for remote alarm control
- UV light tubes for sterilization
- Telescopic trays to locate instruments
- Printer for temperature and humidity data



- GSM phone alarm module
- Battery backup



500 - 700 - 940 lt Capacity  
with glass door (optional)

# HOW TO CONFIGURE FALC STABILITY CHAMBERS

**Falc Test Chambers** are suitable for creating environmental conditions to test samples by combining three variables: temperature, humidity and lights. Considering the many combinations of these variables, we suggest you to directly configure the instrument with the manufacturer, providing all the necessary information, including the application and the mode of use.

The temperature and the humidity of both **Climatic Chambers** and **Stability Chambers** need a close attention: Just as the temperature can reach -30 °C, requiring a specific refrigeration system, humidity can also have peaks of up to 10% RH or even 95% RH.

Applications in stability chambers include stability tests in the *pharmaceutical and cosmetic industries*, among which we can find *the accelerated aging test*, essential to be able to evaluate the shelf life and efficiency of the product and its physical, microbiological and chemical variations when subjected to external temperatures and conditions. In these cases, the test replicates in a significantly reduced time frame, what happens to the product in months or even years.

Another example is the *shelf-life test* food placed on the shelves of food departments in which the reaction of the products under certain conditions of temperature, humidity and light is examined by evaluating its safety, health and organoleptic qualities.

Obviously, the Test Chambers configuration strictly depends on what must be tested and the conditions to simulate; so, it is essential to design the chamber with our technical team who will support you in choosing the suitable accessories and in customizing the machine in accordance with your needs.



## FORCED AIR GROWTH TEST CHAMBERS

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- 18 | Growth Chambers with and without humidity control  
Vertical and Horizontal Airflow
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# FORCED AIR GROWTH TEST CHAMBERS

Growth Chambers with and without humidity control - Vertical and Horizontal Airflow



350 Lt Capacity

+4° to +60°C  
20% to 90% RH  
-10°/-20°/-30° C  
to +60°C with lights off  
-10°C to +60°C  
with lights on without  
humidity control



## FIELDS OF APPLICATION:

- Plant growth
- Seed germination
- Acclimation of plants
- Culture of plant cells and tissues
- Chemical industry
- Test which needs specific temperature, humidity and illumination
- Genetic manipulations of plants
- Cultivation of protoplasm and cells
- Incubation and rearing of insects
- Chemical and pharmaceutical industry
- Research
- Quality test
- Plant biotechnology
- Timber and forestry industry
- Cosmetic Industry



- Models with lights on the door, on sides and back side



550 - 710 - 940 Lt Capacity



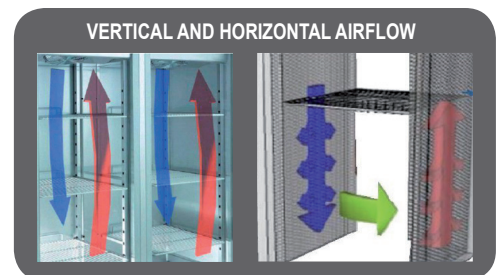
1500 - 2200 Lt Capacity



Touchscreen controller included

## GROWTH TEST CHAMBERS

		Light on the door	Lights on the door and two sides	Lights on the door and back sides
VERTICAL AIRFLOW	Without Humidity	GVD	GVS	-
	With Humidity	GVD-H	GVS-H	-
HORIZONTAL AIRFLOW	Without Humidity	GHD	-	GHS
	With Humidity	GHD-H	-	GHS-H





# FORCED AIR GROWTH TEST CHAMBERS

Growth Chambers with and without humidity control - Vertical and Horizontal Airflow

## STANDARD FEATURES



- Cooling system controller by solenoid electrovalves
- Adjustable safety thermostat to protect the samples
- System setting protected by password
- Key lock on the door



- Temperature range from +4°C to +60°C (optionally from -10/-20/-30°C to +60°C without humidity control)
- Models include forced air refrigeration (distributed uniformly vertically), and have high temperature homogeneity inside of the chamber
- Ultrasound humidity generator, introducing microscopic water drops inside of the chamber at room temperature (electrode system optionally)
- Condensation drying system by cooling
- Independent cooling and heating systems
- Tropicalization treatment, to allow work up to +32°C room temperature



- Internal glass door, with hermetic closing (models up to -10°/-20°/-30°C do not include internal glass door)
- Solid external door with opening aids and big sized handle (double glass door optionally)
- Hermetic compressor built over dampers to reduce noise levels
- AISI 304 stainless steel internal finish
- Epoxy coated steel external finish
- Rounded corners for easy cleaning
- Heated door frame, to ensure an ice free door closing for models up to -10°/-20°/-30°C
- Access port to introduce cables and probes



- Light intensity control, in several levels, with day/night and sunrise /sunset profiles
- LED lighting (optionally fluorescent lights in door or shelves)
- Programmable day/night temperature with or without humidity



- USB port to store system data.
- High density of 60 mm polyurethane insulation (CFC and HCFC free) high density polyurethane
- R404 (CFC and HCFC free) biodegradable cooling gas
- Magnetic gasket on the external door, to ensure a better door closing.
- Access port, to introduce cables and external instruments
- 4 wheels for easy movement with height-adjustable feet
- Height-adjustable perforated stainless steel shelves.



- Including touchscreen controller, with graphic representation
- Work cycles programming
- Control system with battery backup and automatic recharge, for up to 48h
- The controller stores the max/min temperature and/or humidity values with their graphical representation.
- Audible and visible independent alarms for maximum and minimum temperature, with NiCd battery support backup for more than 48h of battery life (72h optionally)
- PC software
- Ethernet output

For models with and without humidity control

**GVD/GVD-H/GVS/GVS-H**

**GHD/GHD-H/GHS/GHS-H**

reference  
temperature 37°C

Temperature range	+4°C to +60°C (optionally from -10/-20/-30°C to +60°C without humidity control)
Accuracy of display	+/-0.1 °C
Homogeneity of temperature	+/-1.5 °C
Stability of temperature	+/-0.75 °C
Accuracy of NTB probe	+/-0.15 °C

Only for models with humidity control

**GVD-H/GVS-H/GHD-H/GHS-H**

reference  
temperature 37°C

Humidity control	20% to 90% RH
Temperature Range	+19°C to +40°C
Accuracy Humidity control	+/-3% RH
Electronic humidity control	4-20mA
Accuracy Electronic humidity control	+/-3% RH
Homogeneity of temperature	+/-1.5°C



Touchscreen controller included

## ACCESSORIES



20 ltr tank in plastic HDPE with faucet  
Code 636.0700.31

# FORCED AIR GROWTH TEST CHAMBERS

## Application table



350 lt Capacity



1500-2200 lt Capacity



550-710-940 lt Capacity

APPLICATION	Temperature range (with the light off)	Temperature range (with the light on)	Humidity range (with the light on)	Max n. of shelves	Light types
Constant temperature	From + 0 to + 60 °C	From + 10 to + 60 °C	15% or 90% RH	4	On the door and/or side
Low temperature	From - 10 to + 60 °C	From - 10 to + 60 °C	Without humidity control	4	On the door and/or sides and/or shelves, with LED lights in shelves below 15°C
Dew temperature	From + 0 to + 50 °C	From + 0 to + 50 °C	Without humidity control	4	On the door and/or sides and/or shelves, with LED lights in shelves below 15°C
Arabidopsis	From +2 to + 50 °C	From + 10 to + 40 °C	20% or 90% RH	6	On the door and/or sides and/or shelves
Plant Growth	From + 2 to + 60 °C	From + 10 to + 50 °C	10% or 90% RH	6	On the door and/or sides
Algae Growth	From + 4 to + 55 °C	From + 10 to + 55 °C	20% or 90% RH	3	On the door
Insect incubation (Drosophila)	From + 2 to + 45 °C	From + 10 to + 50 °C	15% or 70% RH	6	On the door and/or sides
Tissue growth	From + 2 to + 50 °C	From + 10 to + 50 °C	Without humidity control	4	On the door and/or sides
Seed storage	From + 2 to + 50 °C	From + 10 to + 50 °C	20% or 90% RH	15	On the door
	From + 2 to + 50 °C	From + 10 to + 50 °C	Without humidity control	15	and/or sides

# FORCED AIR GROWTH TEST CHAMBERS

## Growth Chambers - Vertical Airflow

### GROWTH CHAMBER WITH/WITHOUT HUMIDITY WITH LIGHTS ON THE DOOR

		GVD/GVD-H 350	GVD/GVD-H 550	GVD/GVD-H 710	GVD/GVD-H 940	GVD/GVD-H 1500	GVD/GVD-H 2200
Capacity	Lt	350	500	700	940	1500	2200
Nr of shelves		1	3	4	4	4+4	4+4
Nr max of shelves		4	6	8	8	8+8	8+8
Nr of doors		1	1	1	1	2	2
Compressor RH		1/2	1/2	3/8	3/8	3/8	3/8
Usable dimensions (WxDxH)	mm	820x540x660	740x540x1200	740x540x1350	990x590x1350	1590x540x1350	1590x840x1350
External dimensions (WxDxH)	mm	925x800x1140	850x800x1730	850x800x1980	850x1100x1980	1700x800x1980	1700x1100x1980

**Growth chamber without humidity with lights on the door GVD** 701.2100.01 701.2100.02 701.2100.03 701.2100.04 701.2100.05 701.2100.06

**Growth chamber with humidity with lights on the door GVD-H** 701.2101.01 701.2101.02 701.2101.03 701.2101.04 701.2101.05 701.2101.06

### GROWTH CHAMBER WITH/WITHOUT HUMIDITY WITH LIGHTS ON THE DOOR AND TWO SIDES

		GVS/GVS-H 350	GVS/GVS-H 550	GVS/GVS-H 710	GVS/GVS-H 940	GVS/GVS-H 1500	GVS/GVS-H 2200
Capacity	Lt	330	535	690	900	1460	2100
Nr of shelves		1	3	4	4	4+4	4+4
Nr max of shelves		4	6	8	8	8+8	8+8
Nr of doors		1	1	1	1	2	2
Compressor RH		1/2	1/2	3/8	3/8	3/8	3/8
Usable dimensions (WxDxH)	mm	720x540x660	640x540x1200	640x540x1350	840x590x1350	1490x540x1350	1490x840x1350
External dimensions (WxDxH)	mm	925x800x1140	850x800x1730	850x800x1980	850x1100x1980	1700x800x1980	1700x1100x1980

**Growth chamber without humidity with lights on the door and two sides GVS** 701.2100.11 701.2100.12 701.2100.13 701.2100.14 701.2100.15 701.2100.16

**Growth chamber with humidity with lights on the door and two sides GVS-H** 701.2101.11 701.2101.12 701.2101.13 701.2101.14 701.2101.15 701.2101.16

V/HZ 220/240 - 50

## Growth Chambers - Horizontal Airflow

### GROWTH CHAMBER WITH/WITHOUT HUMIDITY WITH LIGHTS ON THE DOOR

		GHD/GHD-H 350	GHD/GHD-H 550	GHD/GHD-H 710	GHD/GHD-H 940	GHD/GHD-H 1500	GHD/GHD-H 2200
Capacity	Lt	350	500	700	940	1500	2200
Nr of shelves		1	3	4	4	4+4	4+4
Nr max of shelves		4	6	8	8	8+8	8+8
Nr of doors		1	1	1	1	2	2
Compressor RH		1/2	1/2	3/8	3/8	3/8	3/8
Usable dimensions (WxDxH)	mm	705x580x660	630x580x1200	630x580x1350	880x630x1350	1390x580x1350	1390x880x1350
External dimensions (WxDxH)	mm	925x800x114	850x800x1830	850x800x1980	850x1100x1980	1100x850x1980	1700x1100x1980

**Growth chamber without humidity with lights on the door GHD** 701.2200.01 701.2200.02 701.2200.03 701.2200.04 701.2200.05 701.2200.06

**Growth chamber with humidity with lights on the door GHD-H** 701.2201.01 701.2201.02 701.2201.03 701.2201.04 701.2201.05 701.2201.06

### GROWTH CHAMBER WITH/WITHOUT HUMIDITY WITH LIGHTS ON THE DOOR AND BACK SIDES

		GHS/GHS-H 350	GHS/GHS-H 550	GHS/GHS-H 710	GHS/GHS-H 940	GHS/GHS-H 1500	GHS/GHS-H 2200
Capacity	Lt	330	480	680	900	1400	1980
Nr of shelves		1	3	4	4	4+4	4+4
Nr max of shelves		4	6	8	8	8+8	8+8
Nr of doors		1	1	1	1	2	2
Compressor RH		1/2	1/2	3/8	3/8	3/8	3/8
Usable dimensions (WxDxH)	mm	720x540x660	640x540x1200	640x540x1350	840x590x1350	1490x540x1350	1490x840x1350
External dimensions (WxDxH)	mm	925x800x1140	850x800x1730	850x800x1980	850x1100x1980	1700x800x1980	1700x1100x1980

**Growth chamber without humidity with lights on the door and back sides GHS** 701.2200.11 701.2200.12 701.2200.13 701.2200.14 701.2200.15 701.2200.16

**Growth chamber with humidity with lights on the door and back sides GHS-H** 701.2201.11 701.2201.12 701.2201.13 701.2201.14 701.2201.15 701.2201.16

V/HZ 220/240 - 50

# FORCED AIR GROWTH TEST CHAMBERS

Growth Chambers with and without humidity control - Vertical and Horizontal Airflow



**550-710-940 lt Capacity**  
(with lights on the top,  
shelves and sides optionally)

## OPTIONAL ACCESSORIES

- Temperature range from +4°C to +60°C (optionally from -10/-20/-30°C to +60°C without humidity control)
- Humidity generator up to +95°C RH
- Air drying system up to 15% RH at +4°C
- Additional access ports to introduce cables and probes
- Thermal glass door, with heated frame in models with humidity control or lower temperatures
- External stainless steel finish
- Plugs inside of the chamber
- Potential free output for remote alarm control
- UV light tubes for sterilization
- Telescopic trays to locate instruments
- Printer for temperature and humidity data
- GSM phone alarm module
- Battery backup

# HOW TO CONFIGURE FALC GROWTH TEST CHAMBERS

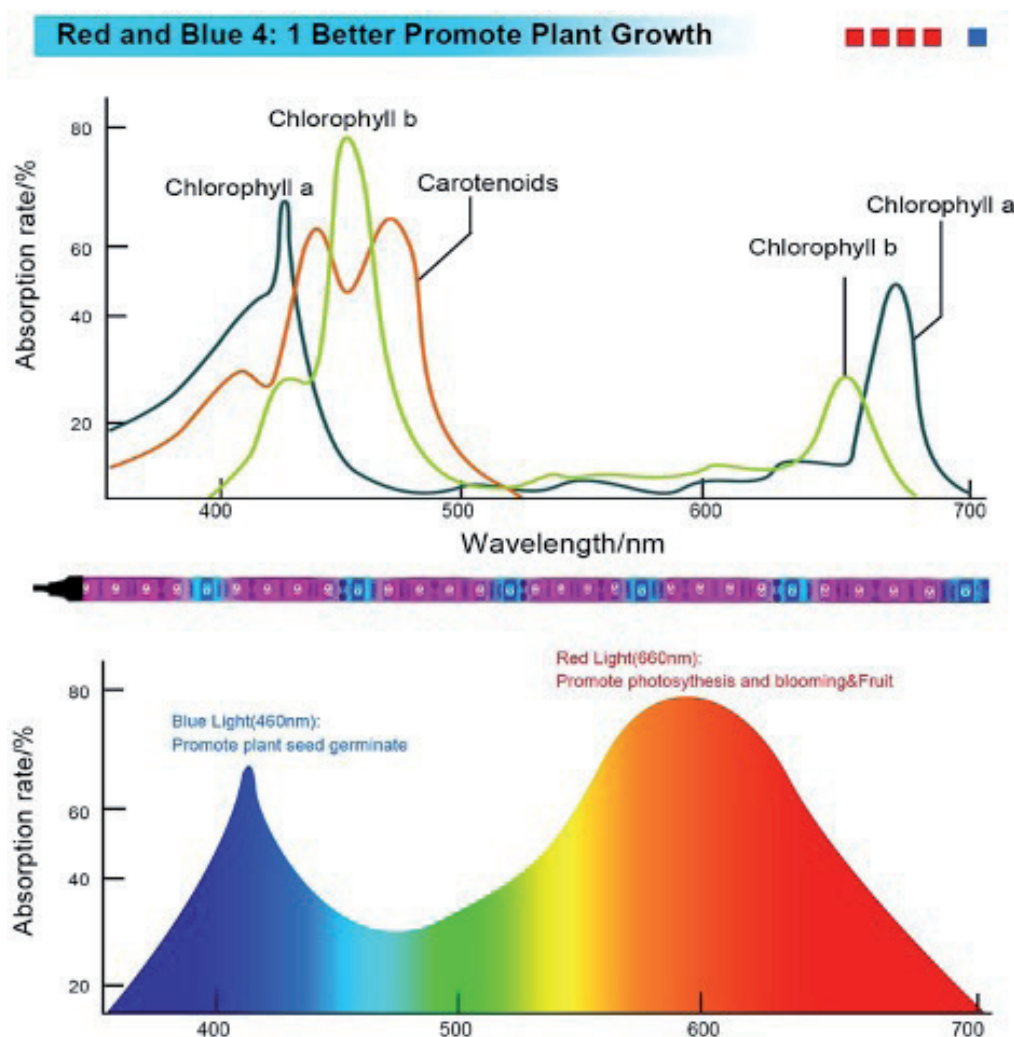
**Falc Test Chambers** are suitable for creating environmental conditions to test samples by combining three variables: temperature, humidity and lights. Considering the many combinations of these variables, we suggest you to directly configure the instrument with the manufacturer, providing all the necessary information, including the application and the mode of use.

The temperature and the humidity of both **Climatic Chambers** and **Stability Chambers** need a close attention: just as the temperature can reach -30 °C, requiring a specific refrigeration system, humidity can also have peaks of up to 10% RH or even 95% RH.

On the contrary, the main variable to consider for **Growth Chambers** are the lights that grant excellent results in typical applications such as *seed storage, plants growth, insects incubation, materials perishability and photostability*.

For example, the following picture shows how the growth phases of plants vary with the spectrum:

- chlorophyll absorption and photosynthesis need a light spectrum between 420 nm ~ 500 nm
- blooming and seed germination prefer a 750 nm ~ 1000 nm light spectrum

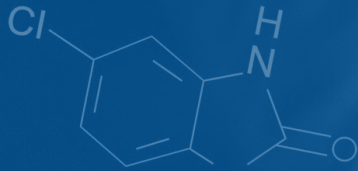


Another concrete example involves *Drosophila*. Its purpose is the care, maintenance and manipulation of laboratory cultures:

- For this type of test, the chamber must have a temperature between 18-26°C, a humidity at 50-70% RH and an 80 micromoles warm light on the door or on the two sides to create a day/night alternance.

Obviously, the Test Chambers configuration strictly depends on what must be tested and the conditions to simulate; so, it is essential to design the chamber with our technical team who will support you in choosing the suitable accessories and in customizing the machine in accordance with your needs.





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