laftech

LAF Technologies Pty Ltd

- PLANT GROWTH CHAMBERS AND CLOSETS
- CLIMATIC TESTS WITH PHOTOSTABILITY
- PHYTOLOGY TESTS CHAMBERS
- HORIZONTAL FLOW CHAMBERS FOR ARABIDOPSIS TESTS
- TISSUES CULTURE CHAMBERS
- DROSOPHILA AND ENTHOMOLOGY CHAMBERS
- ALGAE GROWTH CHAMBER
- SEEDS GROWTH CHAMBERS
- TESTS CHAMBERS WITH PHYTOSANITARIES
- REFRIGERATED INCUBATORS FOR CELL GROWTH WITH CONTROLLED LIGHT

INDEX

OUR PRODUCTS AND APPLICATIONS

- Climatic tests chambers and closets with photoperiod.
- Arabidopsis tests chambers.
- Photostability tests.
- Stabilidy control in food and drinks.
- Algae growth.
- Seeds growth chambers.
- Frost formation.
- Controlled seeds storage.
- Drosophila and insects research.
- Large capacity incubators.
- Growth with LED lights.
- Low temperature chambers with photoperiod.
- Tissues cultures.
- Visitable plant growth chambers.
- Refrigerated incubators.
- Seed drying chambers.

TYPICAL APPLICATIONS

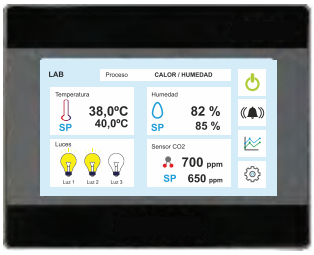
Controlled plant growth conditions: temperature and humidity with photoperiods.

Light instenYesty:
PPDF 20-1200 µmol m/s

Air flow:
Available spectrums: 350 to 820 nm, depending on the required wavelenght.

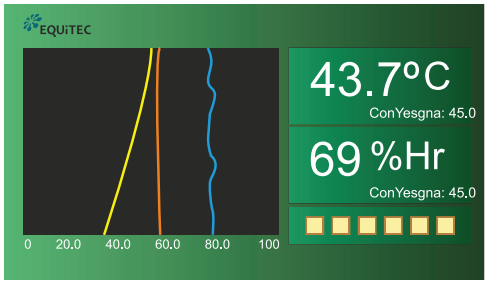
Air flow:
Air flow speed between 0.2 and 0.5 m/s, also ensures optimal temperature uniformity through growing area freely adjustable; Reducing the surface tension of the plants.

CONTROLLERS



4100 SERIES CONTROLLER

ICH NANODAC CONTROLLER



4500 SERIES CONTROLLER

CULTURE TESTS CHAMBERS AND REFRIGERATED INCUBATORS

- Temperature range from +10º to +60º (optional from +4ºC to -10ºC).
- Humidity control: optional work range from 20% to 95% R.H.
- Graphical control panel with 4,3" touchscreen, optional TFT 7,0".
- Electronic data recorder with graphical data representation and USB output for data download.
- Temperature and/or humidity control.
- 0.1ºC precisison probe.
- Microprocessor for control and parameters programming with PID system.
- Height-adjustable lights on the shelves and/or the top and/or the sides.
- Lighting control with 6 levels of intensity, with the posibility to simulate the sunrise/sunset.
- Horizontal or semi-horizontal air flow, to reduce stress on plants.
- Maximum intensity in PPDF 1200 µmol m/s.
- Optional regulation of the air flow speed, to reduce stress on plants.
- Optionally LED or fluorescent lights.
  Ultrasounds humidification system, optionally electrodes or vaporizers.
- Product protection through safety thermostat for maximum/minimum temperature.

GROWTH AND STABILITY TESTS CHAMBERS
HORIZONTAL AIR FLOW MODELS
VERTICAL AIR FLOW MODELS

from +10º to +60ºC
from 20% to 90% HR

Optional
from -10º to +60ºC
from +4ºC to +60ºC

GROWTH CHAMBERS
WITH HORIZONTAL AIR FLOW
IN EGCHS MODELS AND WITH
VERTICAL AIR FLOW
IN EGCVS MODELS

LIGHTNING CONTROL
WITH OR WITHOUT
HUMIDITY CONTROL

OPTIONALLY
FROM +4ºC TO +60ºC
FROM -10ºC TO +60ºC

IN EGCHS/HR
AND EGCVS/HR MODELS
FROM +4ºC TO +60ºC
HUMIDITY RANGE
FROM 20% TO 90% RH

FRONT DOOR LIGHTS

UNIFLOW

EGCHS 855 LED
Model with front door LED lights

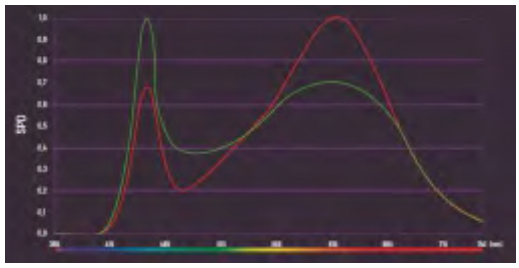
EGCVS 352 3S HR FL
Model with front door and Yesde lights

EGCHS 353 HR LED
Model with front door LED lights

LABORATORY CHAMBERS FOR CLIMATIC TEST AT CONSTANT TEMPERATURE AND HUMIDITY (EGCHS, EGCHS/HR, EGCVS AND EGCVS/HR MODELS)

- Brings 4100, 4500 and NANODAC controllers with graphical data representation.
- Backlighted TFT touchscreen of 4,3" or 7,0" depending on the model for temperature and/or humidity control with graphical representation of the temperature and/or humitidy curve.
- +/-0.1ºC precision on-screen.
- +/-1.0ºC homogeneity on the chamber's inside at 37ºC.
- +/-0-5ºC stability on the chamber's inYesde at 37ºC (depending on the model).
- Cooling system controlled by electrovalves.
- Safety thermostat, protects samples from high/low temperatures.
- Microprocessor control parameters control temperature through a Pt100 or capacitive probe (depending on the model), with a +/- 0.1ºC resolution.
- Humidity control: between 20% and 90% RH (+/- 2% RH), in a temperature range between +19ºC and +40ºC, in EGCHS/HR and EGCVS/HR models.
- Capacitive electronic probe (4-20mA) with a +/-0,75% RH precison (optional 0,5% RH).
- Humidity generator by ultrasound introducing microscopic water drops at ambient temperature in the chamber (optionally electrodes, resistors or nozzles).
- Drying system by condensation through refrigerating evaporator.
- Venting port, for the passage of fresh air (optional).
- Measuring CO_2 system (optional).
- Measuring system of the acumulated radiation intensity with radiation sensor (optional).

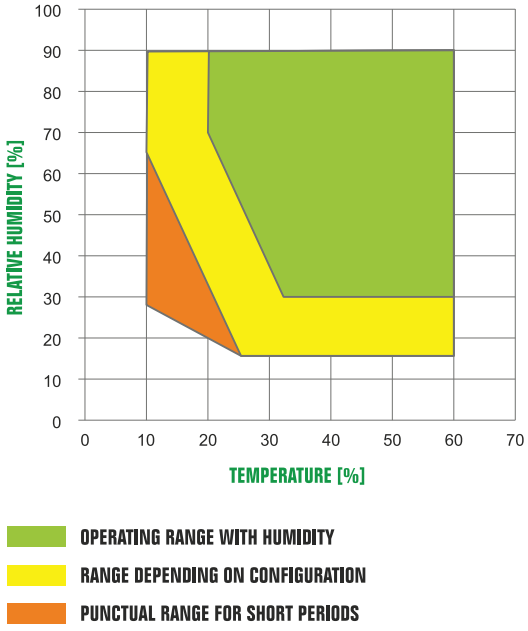
Horizontal air flow



High efficiency LED spectrum in plants
*** For LED details: see page 51**

TECHNICAL SPECIFICATIONS

- Internal door with thermal safety glass, with hermetic seal.
- Opaque external door, heated to avoid condensations in the internal glass door, self-cloYesng and large handle.
- Microprocessor to control parameters with PID system.
- Independent alarms, visual and sonorous, for maximum and minimum temperatures, with backup battery, with more than 48h duration (72h optional).
- System settings protected by numerical passwords.
- Controller remembers maximum and miminum temperature values, with graphical representation of them.
- Optional: external door with heated double glass with large handle.
- Forced air cooling, horizontaly and evenly distributed, with high homogeneity of the temperature inYesde the chamber.
- High density of 60 mm polyurethane insulator (CFC and HCFC free).
- Cooling gas, CFC and HCFC free, biodegradable.
- Hermetic compressor, set on dampers to reduce noise levels.
- Independent cooling and heating systems.
- AlYes 304 stainless steel internal finish (optional AlYes 316).
- Rounded corners to facilitate cleaning.
- Perforated stainless steel shelves, with adjustable height.
- Heated door frame to ensure an ice-free closure, in models up to -10ºC.
- Magnetic seal in external door to ensure hermetic closure of both the external and internal door.
- Wall bypass to introduce wires and external instruments.
- External steel finish, epoxy covered.
- Stainless steel legs with adjustable height.
- 4 wheeled base to facilitate movement, with legs with adjustable height.
- Functions in workplaces with temperatures up to +32ºC.



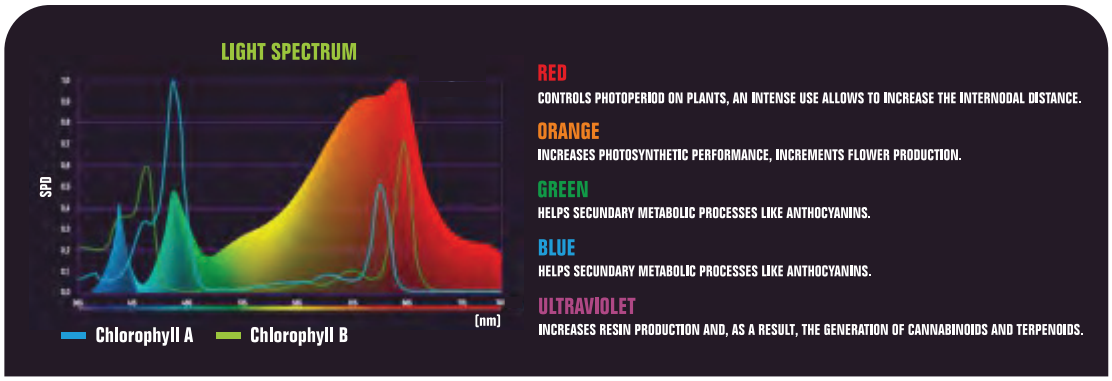
+60º

MODULAR VISITABLE GROWTH CHAMBERS

CUSTOM SPECTRA

We have a wide selection of wavelenghts for photo-biological research, for example UV-A 390 nm, 455 nm blues, 530 nm greens, 660 nm reds and 730 nm far-red.
Likewise, we have specific spectra for use in specific applications, for example for a better production of secondary metabolites, including a better coloration or lettuce production or an improvement of the specific metabolites in micro-algae.

- **Common applications: growth conditions of controlled plants:** temperature and humidity with photoperiods.
- **Light intensity in common applications:** 20-1200 µmol m^{-2}/s^{-1}.
- **Available spectra:** 350 to 920 nm, depending on the required luminaire.



	S 60	M 90	L 120	XL 150
CONSUMPTION	25 W	40 W	50 W	80 W
DIMENSION [MM] [LENGHT/DIAMETER]	595 / Ø 26	895 / Ø 26	1.198 / Ø 26	1.498 / Ø 26
DIMENSION [INCHES] [LENGHT/DIAMETER]	23.4" / Ø 1.02"	35.2" / Ø 1.02"	47.2" / Ø 1.02"	59.0" / Ø 1.02"
CERTIFICATES	Marked CE			
SPECTRUM	Depending on the necessity: adjustable espectrum and intensity			
PPDF INTENSITY	from 5 µmol m/s to 1200 µmol m/s			
DISTANCE TO THE PLANT	100 to 400 mm			
DECAY OF LIGHT INTENSITY	Max. 10% at 35.000h in standard applications 50.000 h			
LIGHT EFFICIENCY (380-820 NM)	Up to 2,2 µmol/W (depending on the spectrum)			
AMBIENT WORK TEMPERATURE	0/+50ºC (32-100º F)			

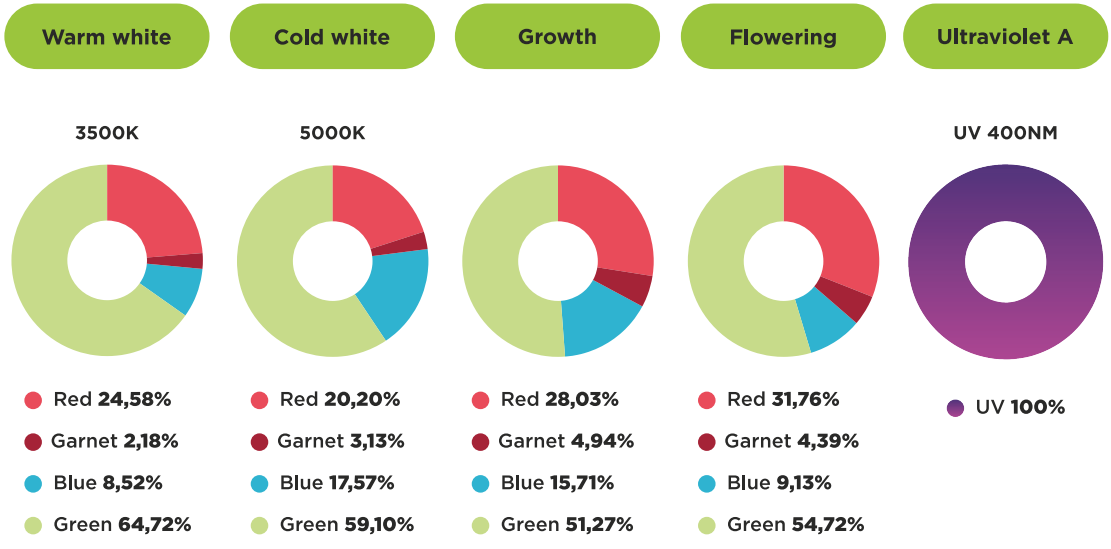
Available with transparent or diffusive cover, G13 connecting elad, IP20 and IP64 degree of protection with Valoya socket set, according to ROHS, limited 5 years warranty.

LED LIGHT TUBES ON THE FLUORESCENT TUBE RACKS

Type T6 or T8 tubes allows series of tubes to be installed in the fluorescent tube racks without any modification (magnetic ballast fixing).
Profitable, very easy to install in terminals with IP64 for particular tests, for example.

LED

GUIDE FOR LED TUBES APPLICATIONS



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Even so, these changes will not affect the main specifications of the units. If the seller or the owner uses symbols or numbers to name the products, you can not extract rights from them. Photographs and drawings may show accessories and instruments not included in the standard models. Colors can change in relation to photographs by the printing process. The catalog may contain products that can not be sent to certain countries due to national or international legislation. The information shown on laws, legal protocols

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