



PLANT GROWTH CHAMBERS



SOLUTIONS DEPENDING OF THE SPACE



REACH-IN
For standard volumes



WALK-IN
Custom fabricated for space optimization



COMMON PARAMETERS OF THE CHAMBERS

- ✓ Time programmer with photoperiod (if it is necessary) which makes simultaneously the temperature change (DAY/NIGHT).
- ✓ Safety thermostat with optical and acoustic alarm.
- ✓ Control of the parameters by microprocessor or electronic regulator.
- ✓ Temperature and humidity regulations by PID algorithmes (Proportional Integral Derivative).
- ✓ Digital reading of the parameters with resolution of 0,1°C.





APPLICATION

PRODUCTION:

- ✓ In-vitro Germination
- ✓ Seed germination
- ✓ Seedlings
- ✓ Mushrooms
- ✓ Animal species, insects, etc.
- ✓ Reptiles, etc.
- ✓ Plants species
- ✓ Algae

R&D:

- ✓ Biotechnology
- ✓ Animal and Plant physiology
- ✓ Food Technology
- ✓ Zoology & Botany
- ✓ Biochemistry
- ✓ Ecology
- ✓ Genetics
- ✓ Disinfestations

CONSERVATION:

- ✓ Genebanks
- ✓ Blood banks
- ✓ DNA banks
- ✓ Bone banks
- ✓ Biological Products
- ✓ chemical reagents
- ✓ Museum exhibits, collections
- ✓ Herbal

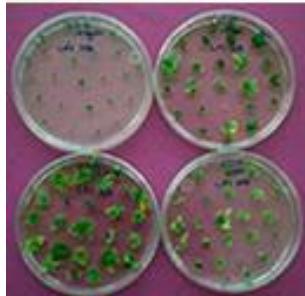




POINTS TO CONSIDER

APPLICATION

- R& D
- Production
- Conservation



PARAMETERS TO CONTROL

- Temperature
- Relative Humidity
- Photoperiod
- CO₂
- Automatic irrigation
- Other parameters



SPACE AVAILABLE

- Compact chambers
- Walk-in chambers



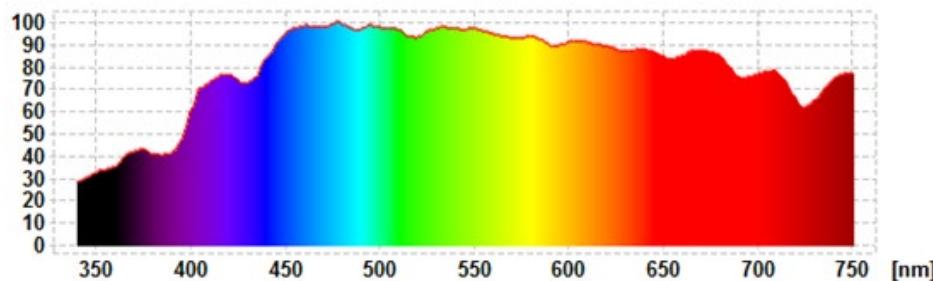


LIGHT

When you are configuring one chamber with lights you have to take in consider the quality, quantity and duration.

-400 – 700 nm, PAR = Photosynthesis Active Radiation (PAR)

- 675 nm, spectrum where the plant can absorb better the light.





LIGHT

HOW TO SELECT THE LIGHT?

- ✓ Plants type and there photo-period.

IMPORTANT!

- ✓ Width and depth of the cultivate area
- ✓ Place of the cultivate zones.
- ✓ Distance of the lights to the plant.
- ✓ Reflecting material
- ✓ Orientation.,
- ✓ Reflector type and number of reflectors to install
- ✓ Lamp and watt
- ✓ Light level and uniformity





LUCES:

PEAK EMISSION WAVELENGTHS OF DIFFERENT LIGHT SOURCES

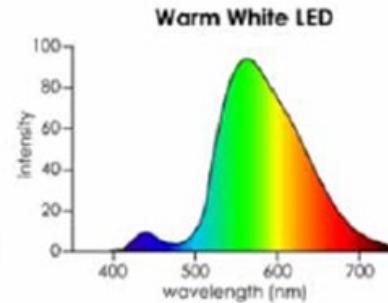
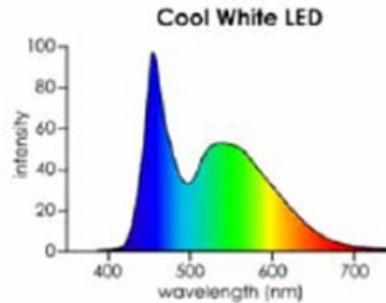
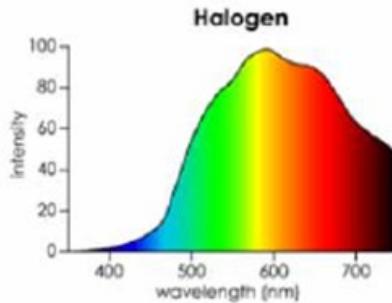
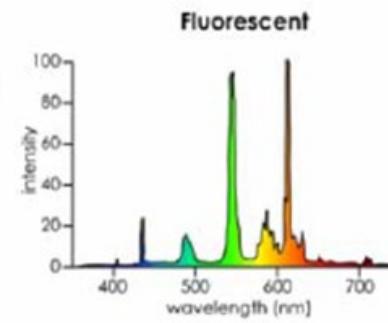
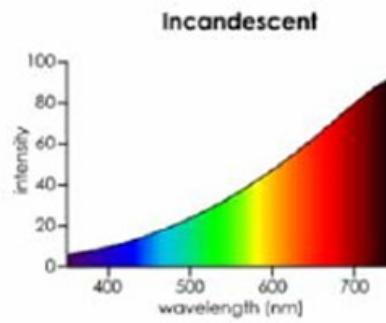
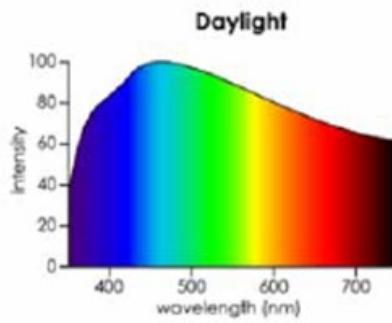
Colour	UV	Blue	Green	Yellow	Orange	Red	Far-red
Wavelengths (nm)	280-400	400-495	495-570	570-590	590-620	620-710	710-850
Sunlight (at earth's surface)	X	X	X	X	X	X	X
Incandescent					X	X	
Full-Spectrum Fluorescent	X	X	X	X	X	X	X
Cool-White Fluorescent	X	X	X	X	X		
Warm-White Fluorescent					X	X	
HID: High Pressure Sodium				X	X	X	X
HID: Metal Halide	X	X	X	X	X		
All Plant Pigments	X	X				X	X

Colour	UV	Blue	Green	Yellow	Orange	Red	Far-red
Wavelengths (nm)	280-400	400-495	495-570	570-590	590-620	620-710	710-850
All Plant Pigments	X	X				X	X



LUCES:

PAR MEASUREMENT COMPARED TO USEFUL PHOTOSYNTHETIC RANGE

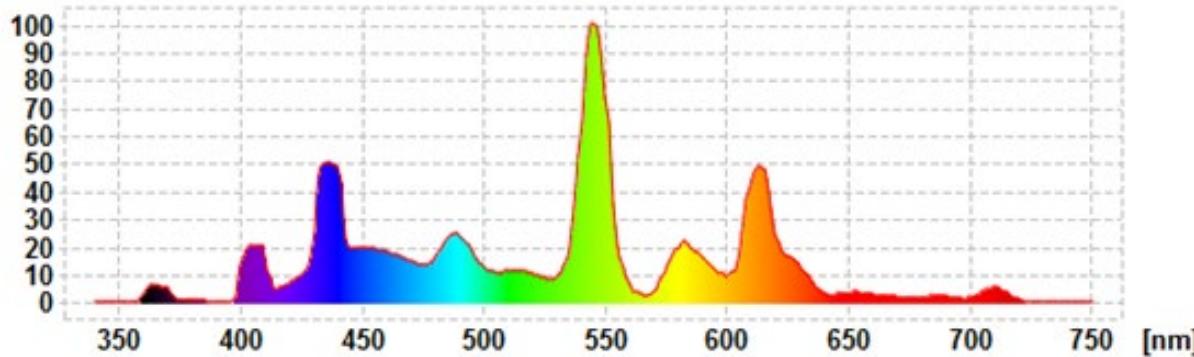
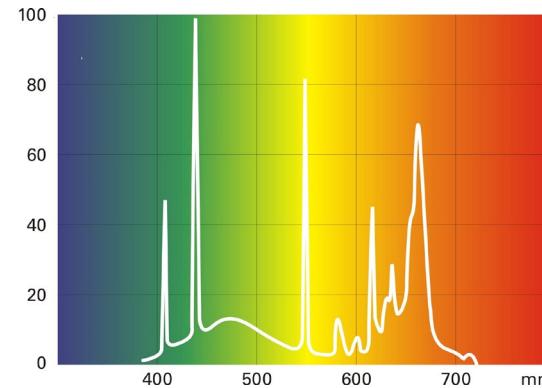




LIGHT:



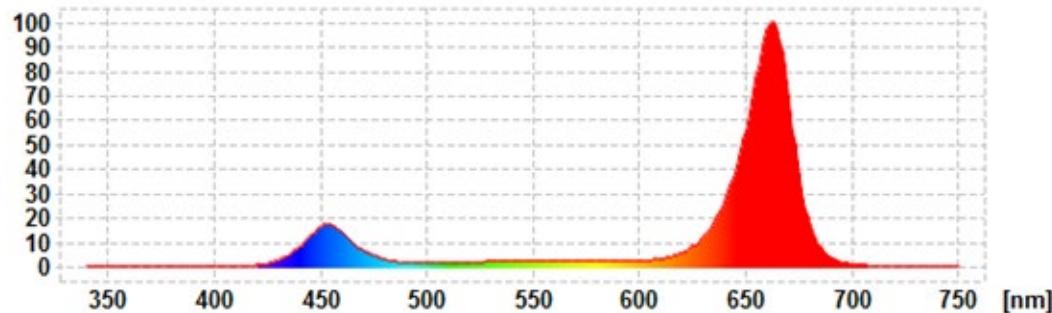
FLUORESCENTS





LIGHT:

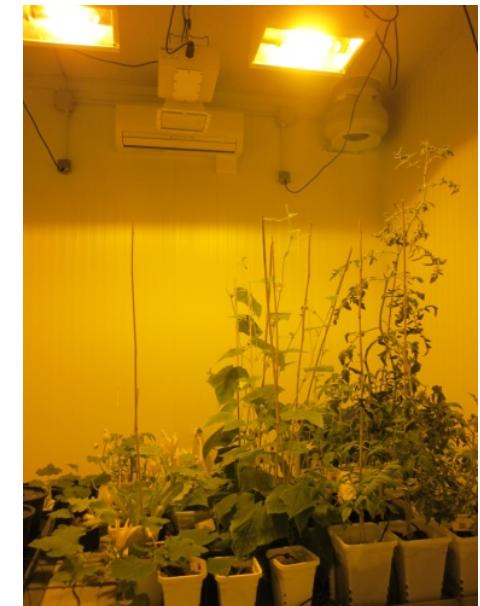
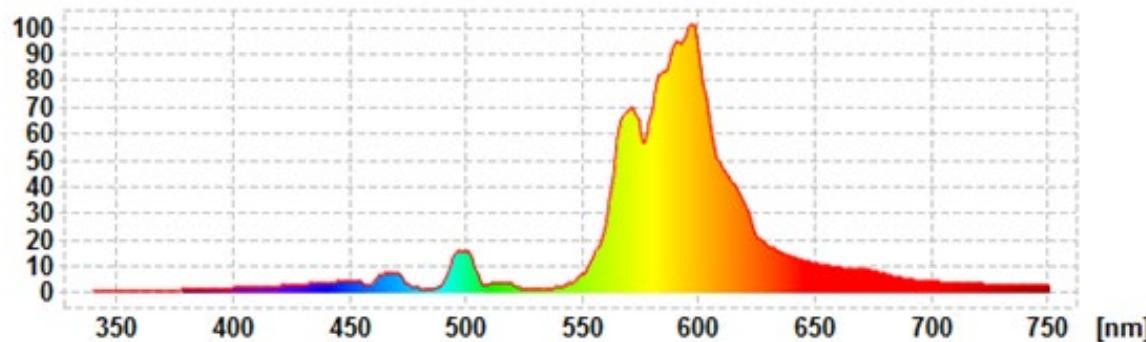
LED TUBES





LIGHT:

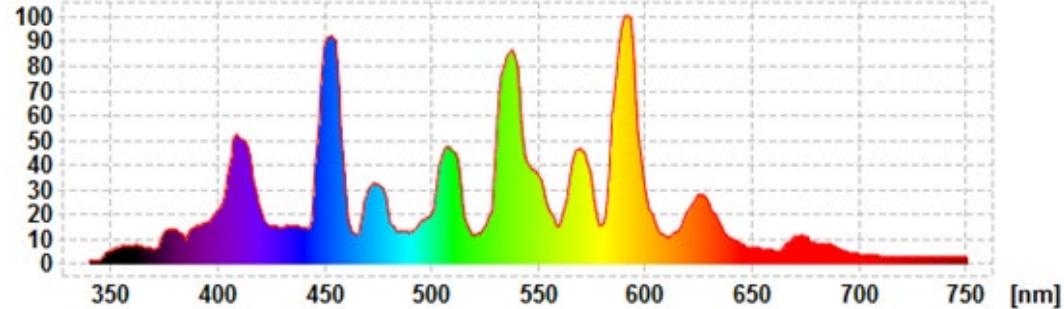
SODIUM LAMP





LIGHT:

METAL HALIDE

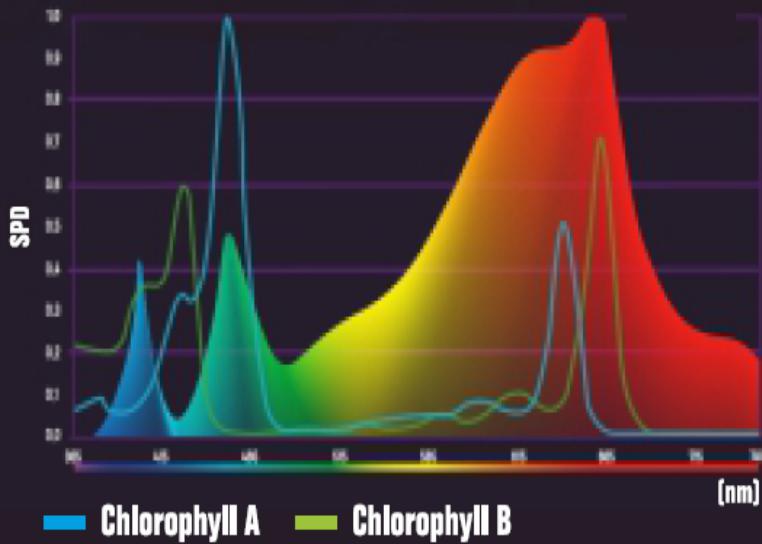




LED's MODULES



LIGHT SPECTRUM



RED

CONTROLS PHOTOPERIOD ON PLANTS, AN INTENSE USE ALLOWS TO INCREASE THE INTERNODAL DISTANCE.

ORANGE

INCREASES PHOTOSYNTHETIC PERFORMANCE, INCREMENTS FLOWER PRODUCTION.

GREEN

HELPS SECUNDARY METABOLIC PROCESSES LIKE ANTHOCYANINS.

BLUE

HELPS SECUNDARY METABOLIC PROCESSES LIKE ANTHOCYANINS.

ULTRAVIOLET

INCREASES RESIN PRODUCTION AND, AS A RESULT, THE GENERATION OF CANNABINOIDS AND TERPENOIDS.

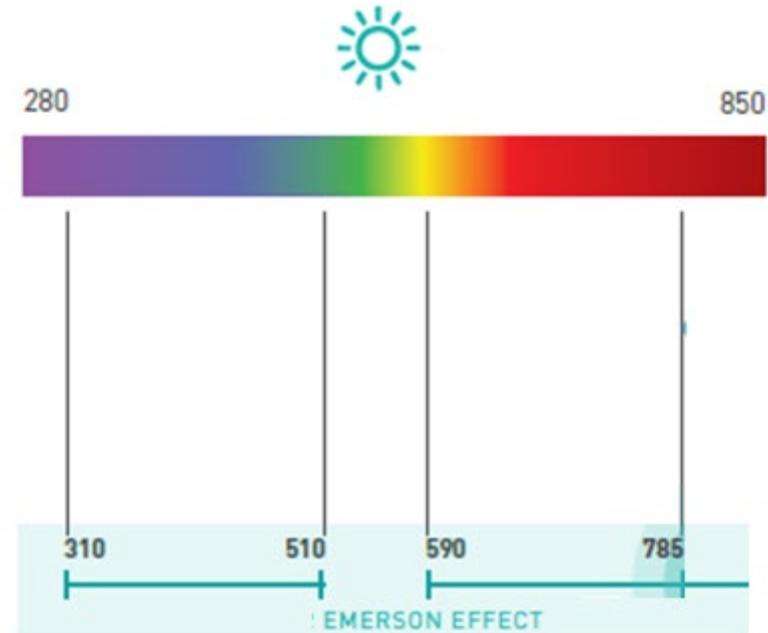


LIGHTS:

The Emerson effect is the increase in the rate of photosynthesis after chloroplasts are exposed to light wavelengths of 670 nm (red light) and 700 nm (Infra Red).

When exposed simultaneously to light of both wavelengths, the rate of photosynthesis is much greater than the sum of the red light and far red light effects. This clearly demonstrates that the two photosystems, while processing different wavelengths, cooperate in photosynthesis.

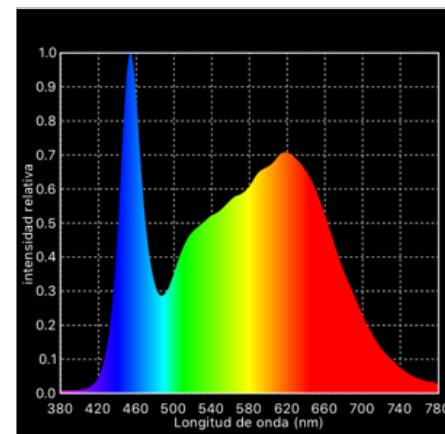
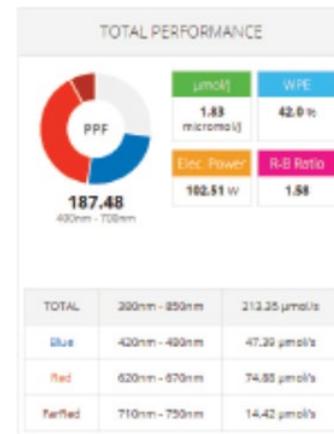
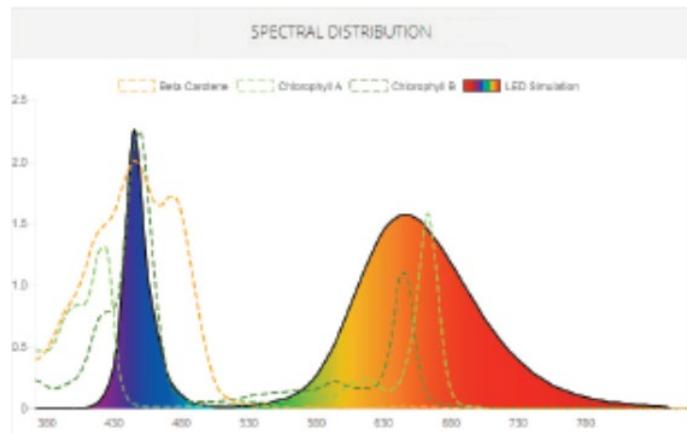
By adding the effect of our laser-diode light it boost the effect by 15% to 20%.





ADVANTAGES

- ✓ The LED light is the new light for the future for the plant growth chambers.
- ✓ This light introduce less energy in the chamber than the fluorescent light. Less heat!
- ✓ The energy consumption of the chamber will be lower.
- ✓ It is possible to configure the necessary spectrum for the plant growth





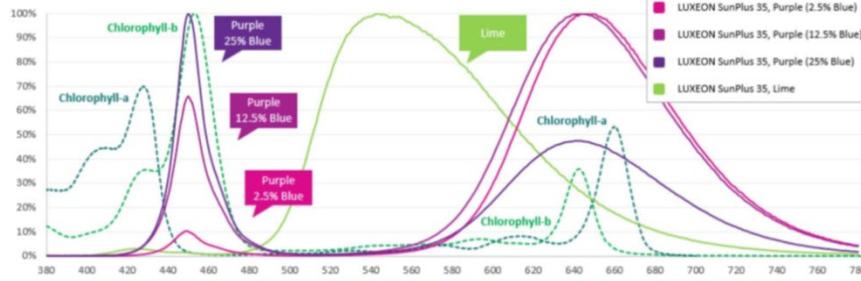
Purple the one LED that covers the vital needs of plants.

- Three versions available with different red/blue ratios to fit the light requirements of different plants and growth stages

Lime serves two purposes:

- Fills in the spectrum
- Lime + purple = white light: good for harvest or visual inspection

% Blue means the amount of PPF ($\mu\text{mol}/\text{s}$) that falls in the blue region (420-480 nm) vs the total amount of PPF in the PAR region (400 nm -700 nm)



✓ **Configurable Blue, Red and Far Red wavelength intensities**





FEATURES

		AP67	AP973L	G2	NS12	Architectural
Ultraviolet	<400 nm	0%	0%	0%	1%/0,5%	0%
Blue	400-500 nm	14%	12%	8%	20%/21%	14%
Green	500-600 nm	16%	19%	2%	39%/38%	31%
Red	600-700 nm	53%	61%	65%	35%/35%	43%
Far-red	700-800 nm	17%	8%	25%	5%/6%	12%
PAR	400-700 nm	83%	92%	75%	94%/94%	88%
CCT	Kelvin	2500	2000	Not applicable	4800/5000	3700
CRI		70	60	Not applicable	80/91	85

AP67

Strong vegetative
and generative growth

G2

Enhancing vernalization
process

Architectural

Warm white spectrum
for architectural applications

AP973L

Strong vegetative
growth

NS12

Wide sun-like spectrum
for research and biotech



FEATURES

GUIDE FOR LED TUBES APPLICATIONS

Warm white

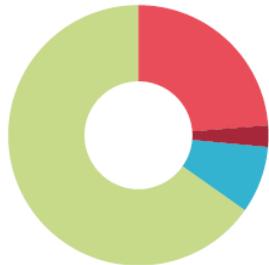
Cold white

Growth

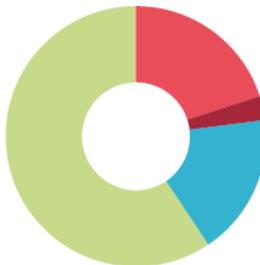
Flowering

Ultraviolet A

3500K



5000K



CROWTH



FLORACIÓN



UV 400NM



● Red **24,58%**

● Garnet **2,18%**

● Blue **8,52%**

● Green **64,72%**

● Red **20,20%**

● Garnet **3,13%**

● Blue **17,57%**

● Green **59,10%**

● Red **28,03%**

● Garnet **4,94%**

● Blue **15,71%**

● Green **51,27%**

● Red **31,76%**

● Garnet **4,39%**

● Blue **9,13%**

● Green **54,72%**

● UV **100%**



FEATURES

	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/+50°C (32-100° F)			



REACH-IN CHAMBERS



DESIGNS

We currently have the largest range of reach-in growth chambers, having more than 1056 different models for 11 possible volumes.

Our chambers allow the modification of the different elements: volume, type of light, temperature ranges, humidity ranges, etc.

Our production capabilities allow us to design new special models according to the specifications set by the customer.

03	CONTROLADORES PARA CÁMARAS DE CRECIMIENTO	
04 09	CÁMARAS PARA ENSAYOS DE CRECIMIENTO Y GERMINACIÓN, LUces PUERTA FRONTEL Y LATERAL MODELOS CON FLUJO HORIZONTAL/VERTICAL DE AIRE	
10 15	CÁMARAS PARA ENSAYOS DE CRECIMIENTO Y GERMINACIÓN, LUces PUERTA FRONTEL Y LATERAL MODELOS CON FLUJO VERTICAL DE AIRE	
16 22	CÁMARAS PARA ENSAYOS DE CRECIMIENTO Y GERMINACIÓN CON LUces EN PUERTA FRONTEL Y TRASERA MODELOS CON FLUJO HORIZONTAL DE AIRE	
23 27	CÁMARAS ENSAYOS DE CRECIMIENTO Y GERMINACIÓN CON LUces EN LOS ESTANTES MODELOS CON FLUJO HORIZONTAL DE AIRE	
28 33	INCUBADORES REFRIGERADOS - LÍNEA INOX BASIC ENSAYOS CLIMÁTICOS DE CRECIMIENTO Y GERMINACIÓN MODELOS CON AIRE FORZADO DE FLUJO VERTICAL	
34 39	INCUBADORES REFRIGERADOS - LÍNEA 4000 ENSAYOS CLIMÁTICOS DE CRECIMIENTO Y GERMINACIÓN MODELOS VERTICALES DE AIRE FORZADO	
40 43	INCUBADORES REFRIGERADOS - LÍNEA BASIC ENSAYOS CLIMÁTICOS DE CRECIMIENTO Y GERMINACIÓN MODELOS CON AIRE FORZADO DE FLUJO VERTICAL	
31	ACCESORIOS PARA CÁMARAS DE CRECIMIENTO Y GERMINACIÓN	
44 48	CÁMARAS PARA DROSOPHILA Y ENTOMOLOGÍA LÍNEA DPH 4000 Y LÍNEA INOX DPH MODELOS VERTICALES DE AIRE FORZADO	
49 51	CÁMARAS PARA CRECIMIENTO MODULARES VISITABLES	
51	GUÍA PARA AP LICACIONES DE LOS TUBOS LED	



OPTIONS

ONLY TEMPERATURE

- ✓ Organic crops
- ✓ Genetics
- ✓ Entomology
- ✓ Several tests



TEMPERATURE & PHOTOPERIOD

- ✓ In-Vitro Cultivation
- ✓ Genetics
- ✓ Entomology
- ✓ Several tests



TEMPERATURE, HUMIDITY & PHOTOPERIOD

- ✓ In-vitro cultivation of plants
- ✓ Entomology
- ✓ Food cured
- ✓ Several tests





COMMON PARAMETERS

- ✓ Photo-period
- ✓ Temperature range: from + 10°C to + 60°C.
- ✓ Humidity range: from 20% to 90% RH,
with controlled humidity between + 20°C and + 50°C.
- ✓ Interior made of stainless steel AISI 304 , optional AISI 316.
- ✓ Exterior, steel coated with epoxy. , optional AISI 304
- ✓ Polyurethane insulation injected at high pressure free of CFC
with density of 40 kg / m³.
- ✓ 60 mm insulation thickness.
- ✓ Round corners for easy cleaning,
- ✓ Drainage inside the chamber.
- ✓ 1 port of 40 mm ø with plug.
- ✓ Easily removable guides and shelves.





COMMON PARAMETERS

- ✓ Pivoting door with lock and built-in handle.
- ✓ Main blind door
- ✓ Interior glass door and large handle.
- ✓ Height adjustable shelves
- ✓ Wheels
- ✓ Data logger
- ✓ USB output
- ✓ Graphical representation
- ✓ RS485 connection port with Modbus
- ✓ Potential free output
- ✓ Battery support
- ✓ Power supply: 230V



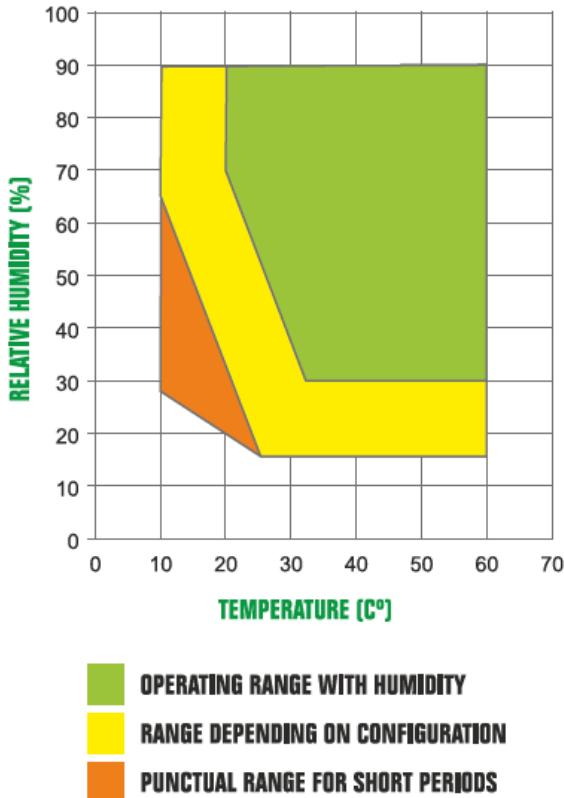


TEMPERATURE AND HUMIDITY RANGE

EICS and EICHS series could be manufactured under conditions of only temperature or temperature and humidity.

General features:

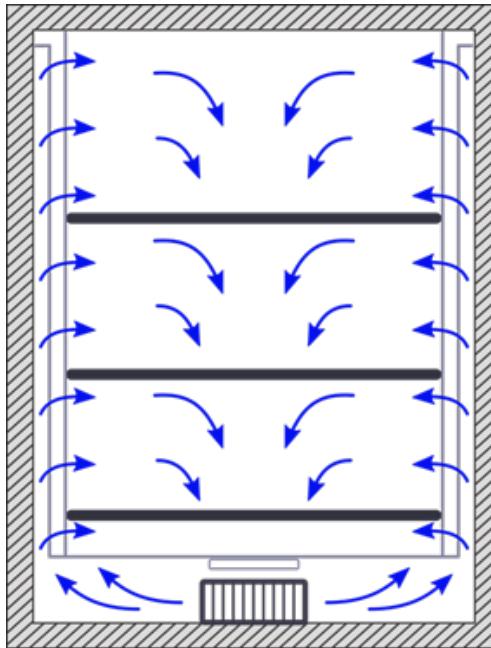
- **Temperature range: from +4°C to +60°C**
- **Humidity range: from 20% to 90% RH.**
- **Homogeneity of +/-0,5°C at 27°C**
- **Stability of +/-0, 1°C at 27°C:**



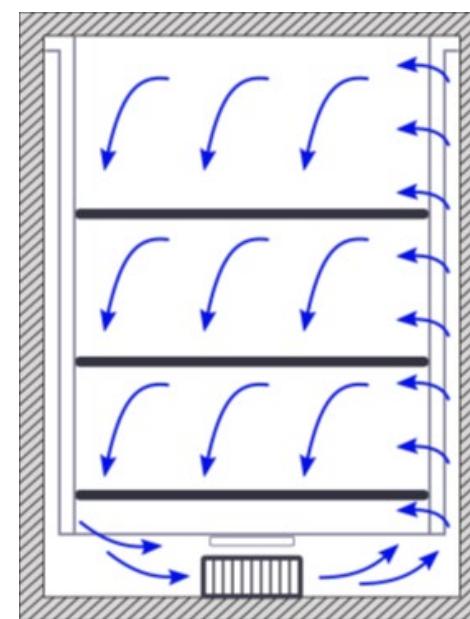


AIRFLOW

HORIZONTAL



VERTICAL



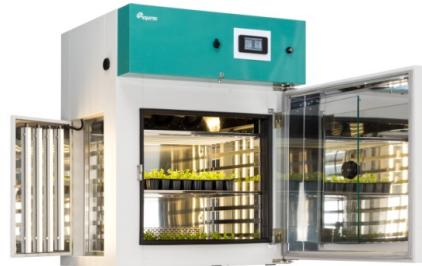


LIGHTS POSITION

LIGTHS ON DOOR



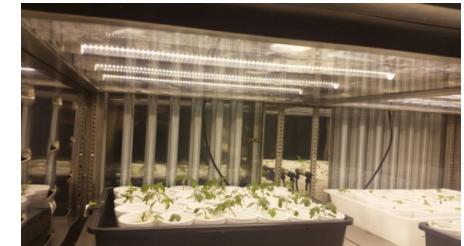
LIGHTS ON SIDES



LIGHS ON DOOR
& SIDES



LIGHS ON SHELVES





MODELS

Models	EGCVS	EGCVS HR	EGCVS 3S	EGCVS 3S HR	EGCHS	EGCHS HR	EGCHS 2S	EGCHS 2S HR	EGCHS 1L	EGCHS 2L	EGCHS 3L	EGCHS 1L HR	EGCHS 2L HR	EGCHS L HR
AIRFLOW	Vertical	Vertical	Vertical	Vertical	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal
HUMIDITY		√		√		√		√		√				
FRONTAL LIGHTS	√	√	√	√	√	√	√	√						
FRONTAL + 2 SIDES LIGHTS				√		√								
FRONTAL + BACKSIDE LIGHTS								√	√					
LIGTHS ON SHELVES									√	√	√	√	√	√



HOW TO SELECT THE MODEL?

- Select the type of airflow: vertical or horizontal.

EGC**VS** (**VERTICAL** airflow) / EGC**HS** (**HORIZONTAL** airflow)

- Select the volume.

EGC**XS** – **190, 350, 505, 515, 700, 750, 850, 1200, 1500, 1800, 2200, 2800 or 2900.**

- Select if you want the humidity or not.

EGC**XS HR** (**WITH** humidity) / EGC**XS** (**WITHOUT** humidity)

- Select the control:

EGC**XS ***3 (NANODAC)** / EGC**XS ***4 (Control 4100)** / EGC**XS ***5 (Control 4500)**

- Select the type of light

EGC**XS LED (LED lights)** / ECG**S (Fluorescent ligths)**

- Select the position of the lights.

EGC**XS FL (Frontal)** / EGC**XS 2S FL (Frontal & Backside)** / EGC**XS 3S FL (Frontal & Lateral's)** / EGC**XS 1,2,3L (Shelves)**



CONFIGURATIONS EICHS Models

Model												
Models EGCHS	190	350	500	700	750	850	1200	1500	1800	2200	2800	2900
Gross Capacity	190	350	490	665	735	860	1180	1490	1855	2195	2798	2955
Net Capacity	185	306	386	492	505	690	912	1178	1450	1745	2150	2270
Internal Dimensions	520x620x550	760x620x650	605x625x1020	605x625x 1300	505x625x 1600	850x625x1300	850x825x1300	1450x625x1300	1450x625x1600	1450x925x1300	1450x925x1600	2270x625x1600
External Dimensions	725x800x1000	800x800x1200	850x800x1730	850x800x1980	1100x800x1980	1100x800x1980	1100x1000x1980	1700x800x1980	1700x1100x1980	2050x800x1980	2050x1100x1980	3000x800x1980
Nr. Of shelves	1	2	3	4	4	4	4 + 4	4 + 4	4 + 4	4 + 4	4 + 4 + 4	
Shelves Dimensions	470x610	650x610	530x615	530x615	530x615	780x615	780x815	530x615	530x615	530x915	530x915	530x615
Shelves Surface	0,29/0,29	0,40/0,80	0,32/0,97	0,32/1,28	0,32/1,28	0,48/1,92	0,64/2,56	0,32/2,58	0,32/2,58	0,48/3,84	0,48/3,84	0,32/3,84



CONFIGURATIONS EICVS Models

Model												
Mod ECVS	190	350	500	700	750	850	1200	1500	1800	2200	2800	2900
Gross Capacity	220	376	529	685	699	865	1179	1420	1725	2150	2680	2745
Net Capacity	190	314	441	546	583	721	979	1175	1465	1790	2250	2288
Internal Dimensions	620x560x550	860x560x650	750x560x1050	750x560x1300	650x560x1600	990x560x1300	990x760x1300	1600x560x1300	1600x560x1600	1600x860x1300	1600x860x1600	2550x560x1600
External Dimensions	725x800x1000	800x800x1200	850x800x1730	850x800x1980	1100x800x1980	1100x800x1980	1100x1000x1980	1700x800x1980	1700x1100x1980	2050x800x1980	2050x1100x1980	3000x800x1980
Nr. Of shelves	1	2	3	4	4	4	4 + 4	4 + 4	4 + 4	4 + 4	4 + 4	4 + 4 + 4
Shelves Dimensions	470x550	650x550	530x550	530x550	530x550	780x550	760x750	530x550	530x550	530x850	530x850	530x550
Shelves Surface	0,26/0,26	0,36/0,72	0,29/0,87	0,29/1,16	0,29/1,16	0,43/1.72	0,57/2,28	0,29/2,32	0,29/1,96	0,45/3,60	0,45/3,60	0,29/3,36



NEW DESIGNS

New chamber configuration, with an interior height of 1600 mm and an exterior of 1980 mm, ready for easy access through standard doors.

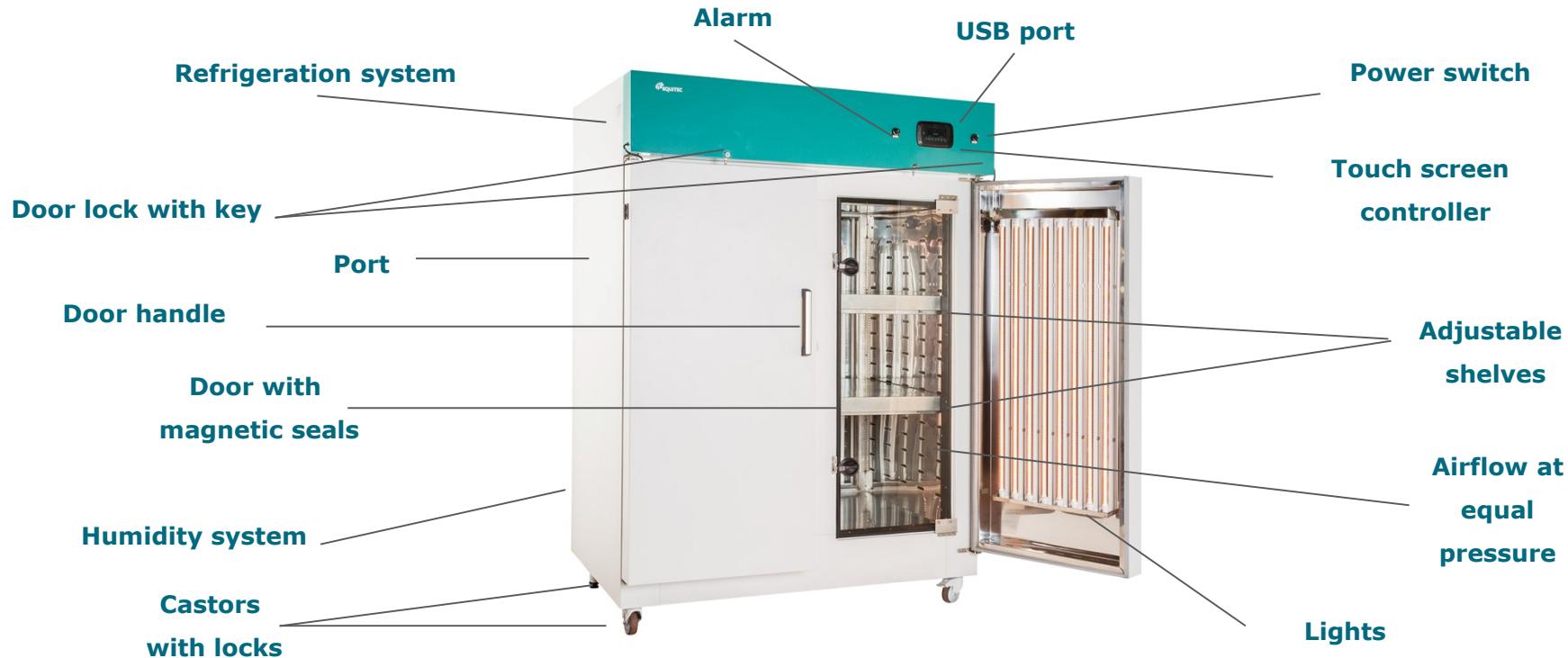
The control cabinet and cold groups on the side allow to reduce the height, in addition to being able to have a more ergonomic and comfortable maintenance access.

This new design will be applied to EGCXS models: 750, 1800, 2800 and 2900





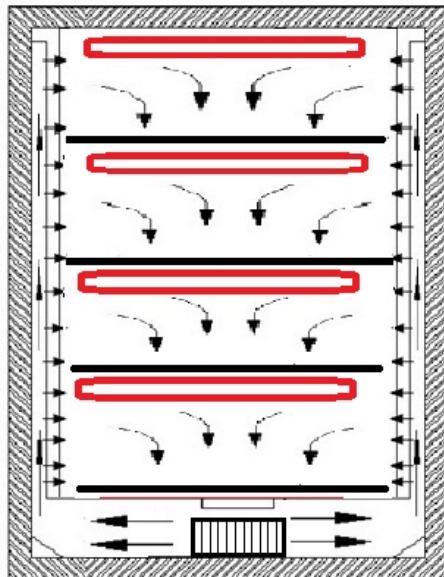
DESCRIPTION





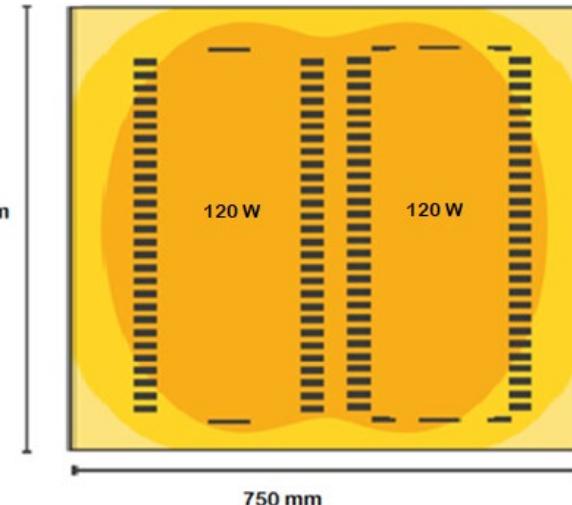
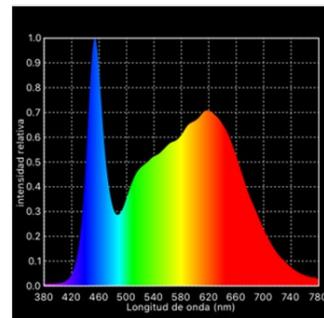
AIRFLOW / LIGHT

HORIZONTAL AIRFLOW



LIGHT

Iluminancia	25116 lux
Fotocandela	2333.3 fc
PPFD(380-780nm)	421.38 $\mu\text{mol}/\text{m}^2\text{s}$
λ_p	454 nm
λ_D	609 nm



0 - 160 $\mu\text{mol}/\text{s}$

160 - 365 $\mu\text{mol}/\text{s}$

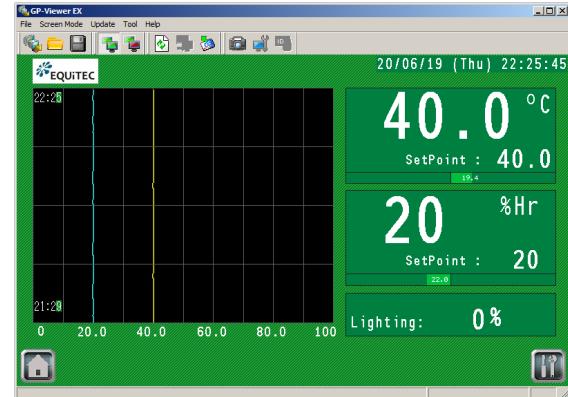
365 - 730 $\mu\text{mol}/\text{s}$



CONTROL

4500 CONTROLLER – 5 SERIES

- ✓ Microprocessor controller
- ✓ 4.0" or 7.0 "TFT recoil touch screen.
- ✓ Backup battery, with automatic recharge, guarantees 48 h of duration in case of power failure. The charging status is continuously displayed on the screen for immediate checking.
- ✓ Graphical representation on the screen
- ✓ Integrated data logger
- ✓ Resolution / Accuracy of +/- 0.1°C.
- ✓ MODBUS TCP / IP for the Ethernet connection. External connection to PC.
- ✓ Intuitive PC software to visualize data. (optional)
- ✓ Day / night cycle with temperature, humidity, light and timer control.





CONTROL 4100 – 2 SERIES

- ✓ 4.3 " or 7" TFT touch graphic display backlit.
- ✓ PID Controller with Microprocessor
- ✓ Data register
- ✓ USB port for downloading the registered data.
- ✓ User password
- ✓ Temperature and humidity graph on the screen
- ✓ Backup battery for alarm values.
- ✓ Free potential output for remote alarm (optional)
- ✓ Module for tests with light.
- ✓ Auto diagnosis
- ✓ ETHERNET / MODBUS TCP / IP
- ✓ PC software, intuitive; for data sample.





CONTROL NANODAC - 3 SERIES

- ✓ 3.4 "TFT graphic display backlit.
- ✓ PID Controller with Microprocessor
- ✓ Data register
- ✓ USB port for downloading the registered data.
- ✓ User password
- ✓ Temperature and humidity graph on the screen
- ✓ Control module according to regulation **21 CFR part 11**, optional
- ✓ Backup battery for alarm values.
- ✓ Free potential output for remote alarm (optional)
- ✓ Module for tests with light.
- ✓ Auto diagnosis
- ✓ ETHERNET / MODBUS TCP / IP
- ✓ PC software, intuitive; for data sample.
- .





HOW TO SELECT THE MODEL?, EXAMPLE

- VOLUME: 2200
- WITH HUMIDITY
- HORIZONTAL AIRFLOW
- CONTROL 4500
- LED LIGTHS
- LIGHTS ON FRONTAL & BACKSIDE

= **EGCHS 2205 HR LED 2S**





INSTALATION

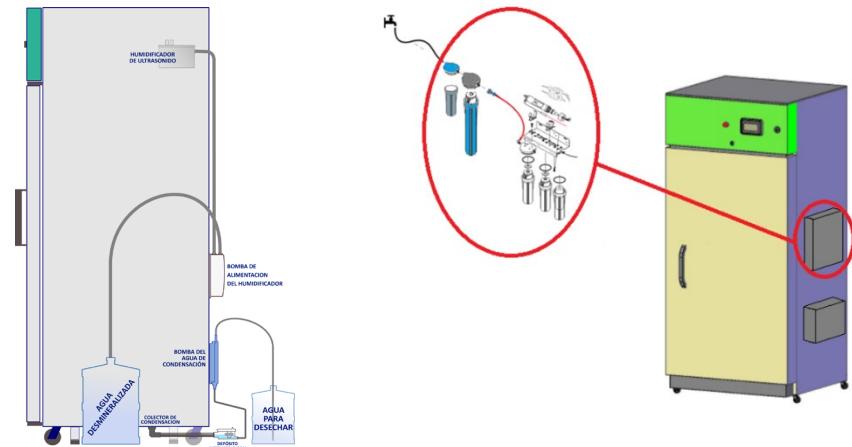
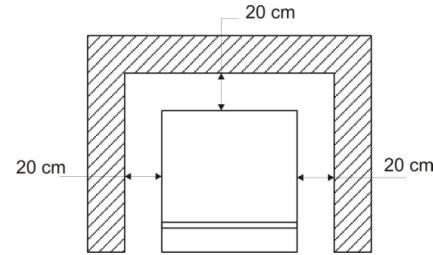
✓ **Space.** Easy to access, having found the dimensions of the equipment. It is recommended that the room is adequately ventilated and in no case should it exceed 28° C. Leaving a space behind the equipment (20-30 cm).

✓ **Electrical supply.** It depends on the selected voltage.

✓ **Water supply** (for devices with humidity).

Distilled or osmotized water should be used, for example, humidity generator inside the chamber

✓ **Sewer system.** Drainage should be placed at or near ground level. And it must have a standard diameter of 45 mm.



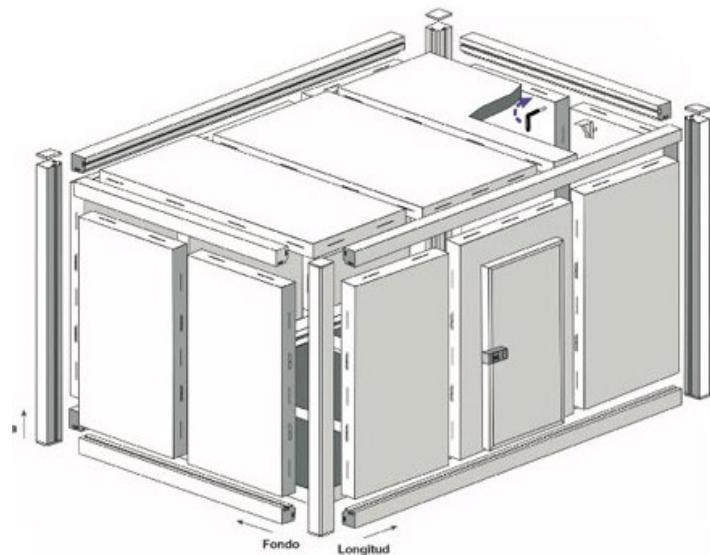


WALK-IN CHAMBERS



FEATURES

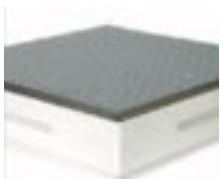
- ✓ Interlocked sandwich panels.
- ✓ Insulation with polyurethane CFC free, high pressure injected with density of 45 kg/m³ and a coefficient of thermal conductivity of 0,021 Kcal/mh°C.
- ✓ Panel Thickness, 80 mm.
- ✓ Interior finished: galvanized steel or stainless steel (AISI 304L or AISI 316L).
- ✓ Exterior: coating with galvanized metal sheet.
- ✓ Pivoting door with aluminum command.
- ✓ Standard dimensions for door, 800 x 1830 mm (W x H).
- ✓ Observation window.
- ✓ Automatic closing with key lock and interior security opening.
- ✓ Port: 40 mm Ø
- ✓ Nonskid Floor of 100 mm in stainless steel AISI 304.
- ✓ Sanitary ratio included in all profiles.





FEATURES

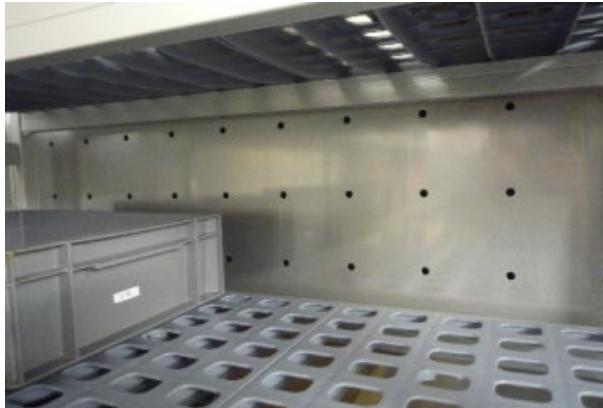
- ✓ Control by Series 4500, 4.3" TFT graphic touch screen.
- ✓ Temperature, humidity and light intensity controlled.
- ✓ Controlled air flow.
- ✓ Humidity generation system by Ultrasound.
- ✓ Light type: fluorescent, LED, metal halide...
- ✓ Cooling system housed in separate unit or prepared for outdoor conditions.
- ✓ Sensors, PT100 for temperature and capacitive humidity sensor.
- ✓ CO₂, O₂, control units (optional).
- ✓ Automatic irrigation system (optional)
- ✓ Thermostat for maximum and minimum temperature values.





HORIZONTAL AIRFLOW

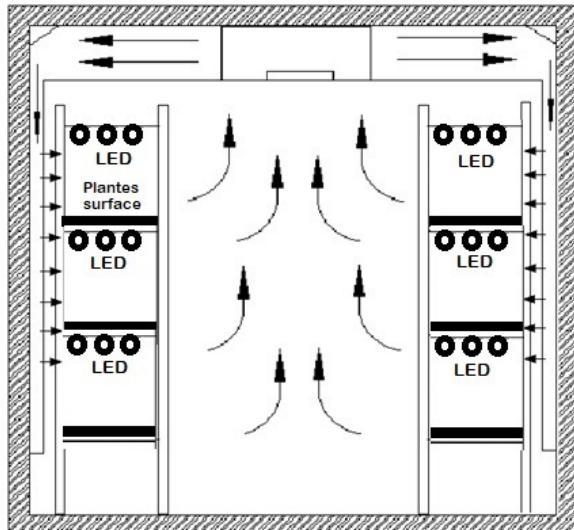
- ✓ Uniform conditions
- ✓ Each shelf is under the same climatic conditions.
- ✓ High stability and uniformity
- ✓ Option of vertical airflow.





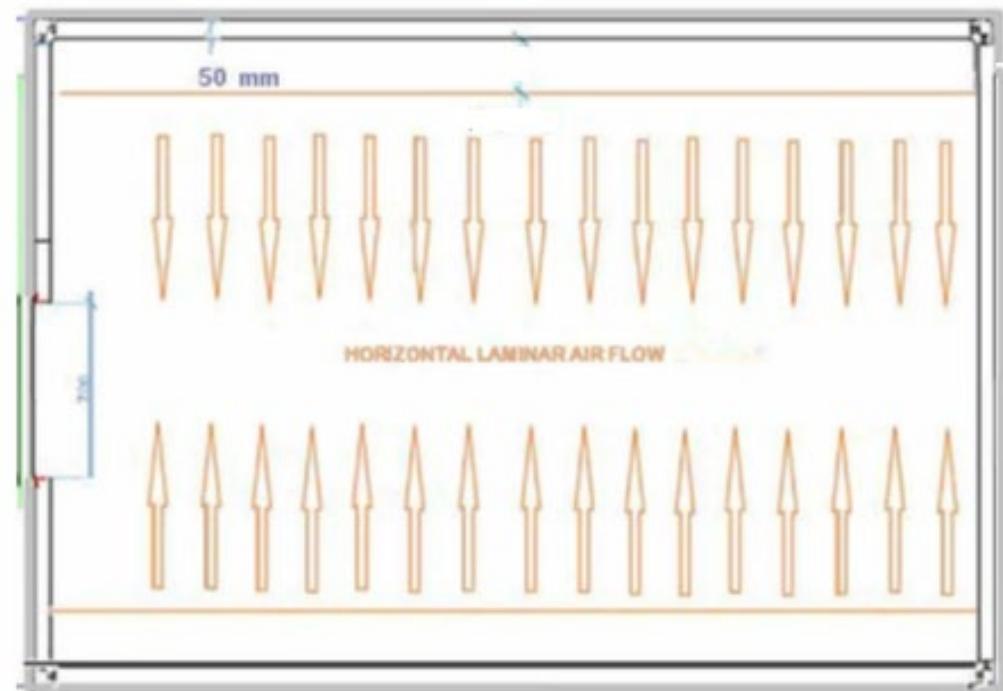
HORIZONTAL AIRFLOW

- ✓ **Greater uniformity conditions.**
- ✓ Each shelves will be under the same climatic conditions.
- ✓ **High stability and uniformity.**
- ✓ Optional vertical air flow.



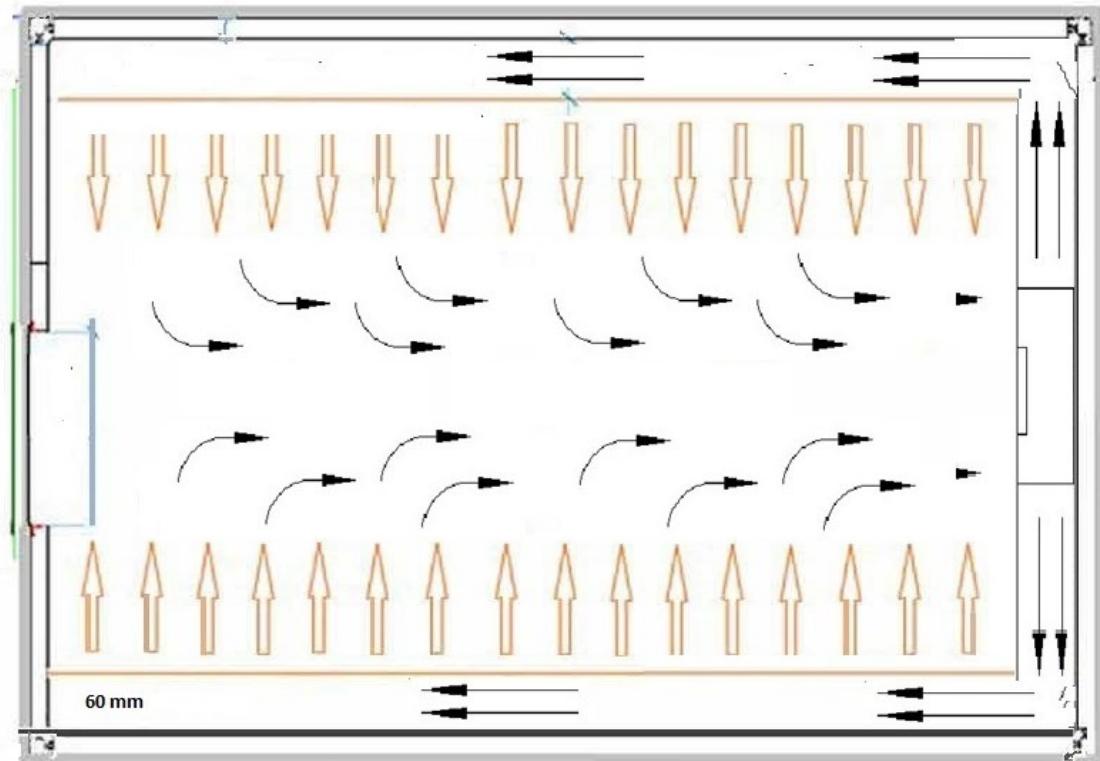
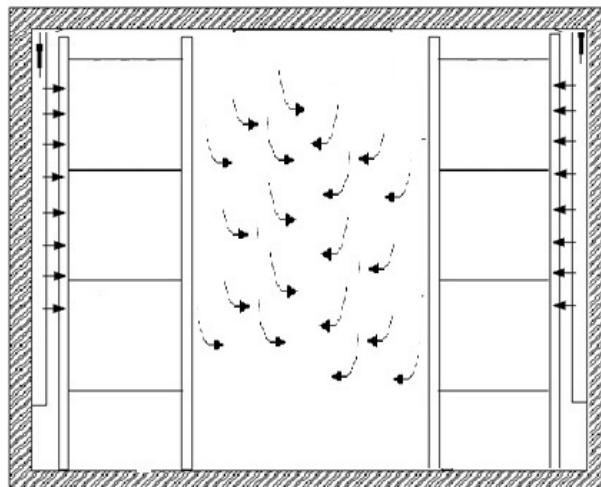


INTERIOR





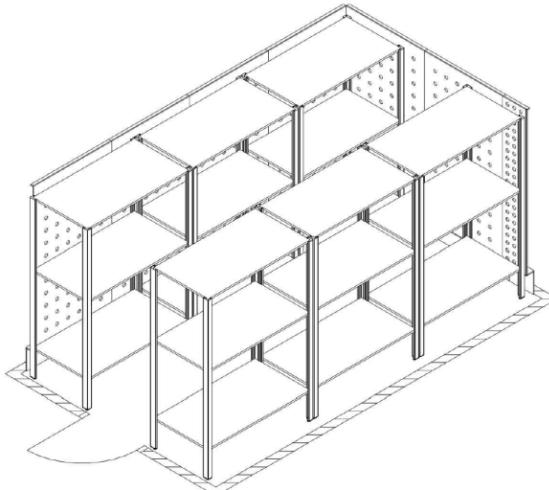
INTERIOR





HORIZONTAL AIRFLOW

- ✓ Possibility to place a plenum on the backside for small height.
- ✓ Maintenance of horizontal airflow for maximum stability.
- ✓ High stability and uniformity.
- ✓ Designs made to measure.





SHELVES

ADJUSTABLE LIGHT

- ✓ Automatic or manual
- ✓ The plant will be in a table and the light will zoom in or out to the plants



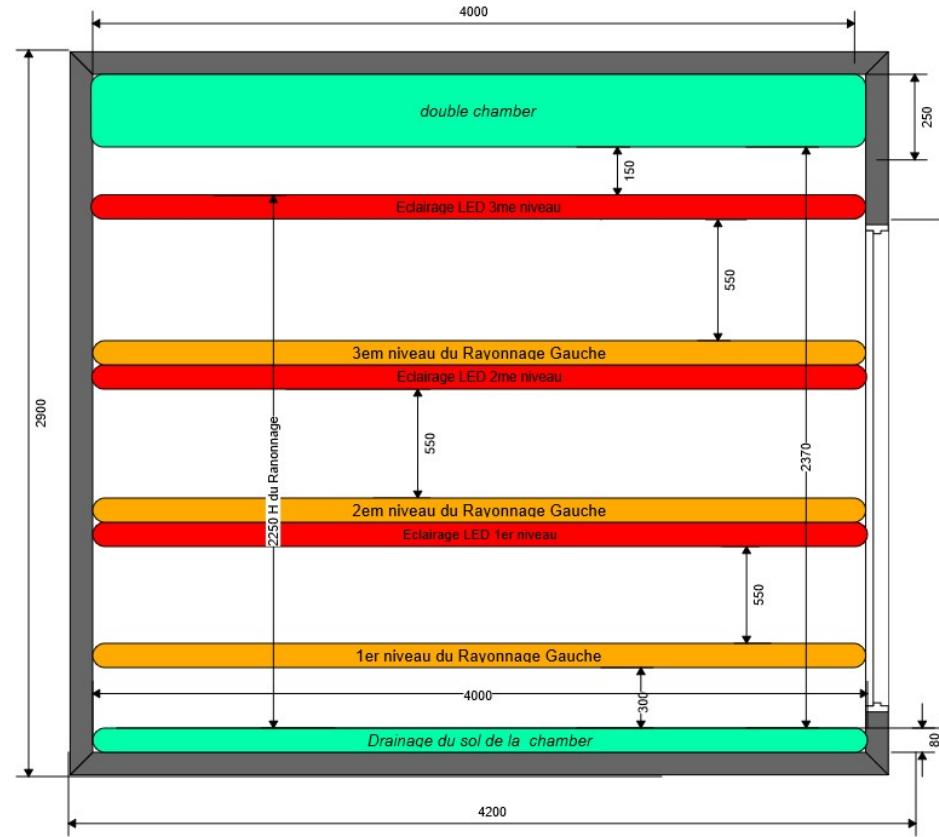
FIXED SHELVES

- ✓ The plant could be at the same distance to the light
- ✓ The shelves could be removable and put in a different distance to the light.



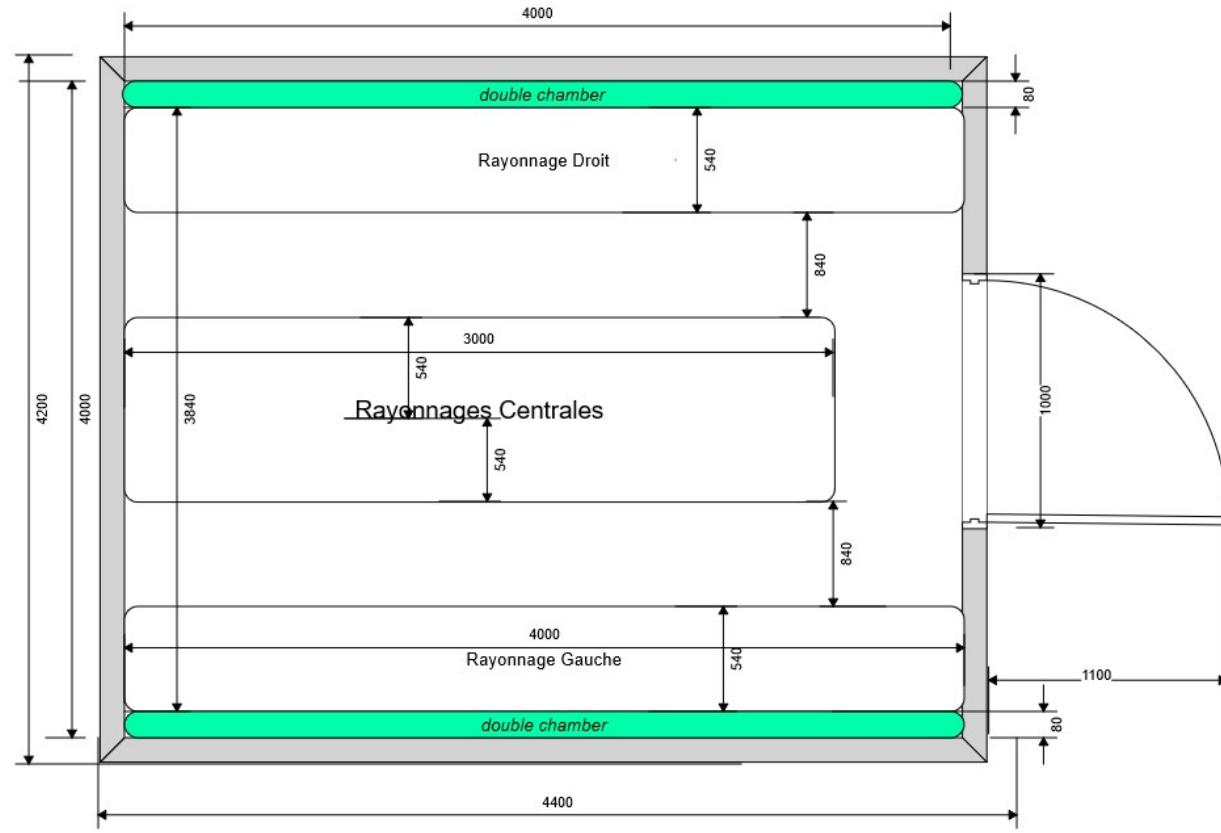


SHELVES





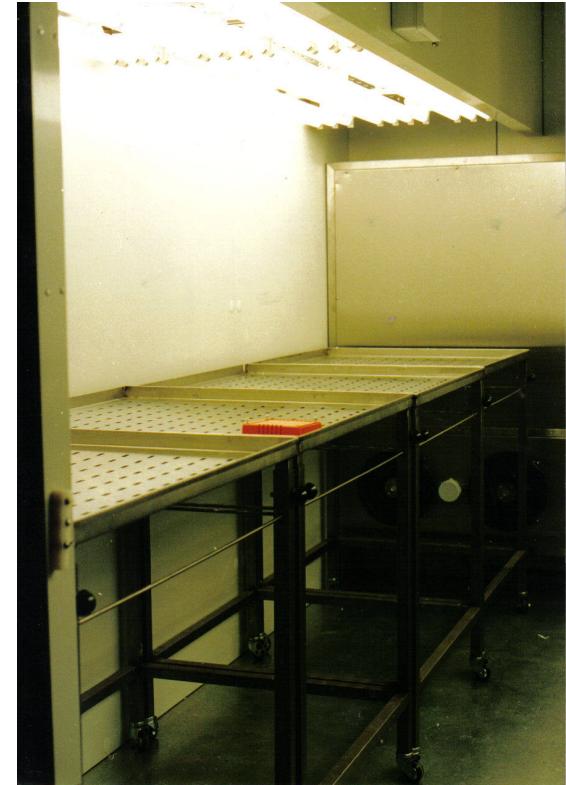
SHELVES





TROLLEYS

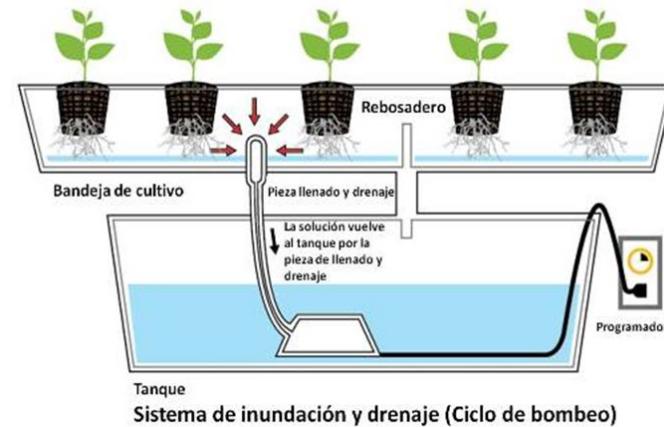
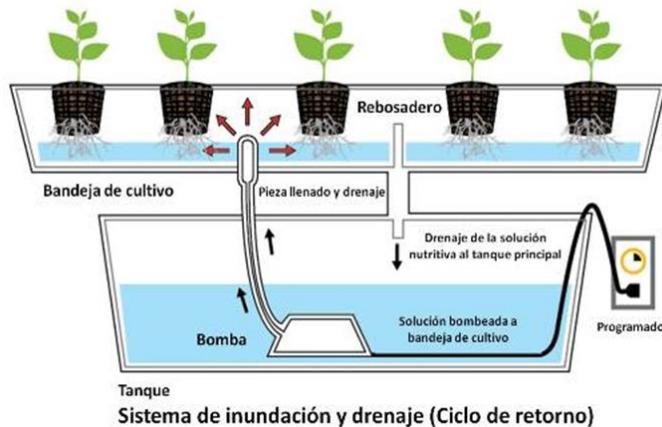
- ✓ Adjustable in height
- ✓ With drainage.
- ✓ With casters to easy movement





IRRIGATION SYSTEM (Optional)

- ✓ Systems of flood and drainage (Ebb and Flow).
- ✓ The system of hydroponic culture(culturing) Ebb and Flow with the plants in trays.
- ✓ They serve as container of the nourishing solution.
- ✓ The plants will be in handles with an inert substratum.





CONTROL OF CO₂ (Optional)

- ✓ This Growth Chamber allows the enrichment of CO₂ inside the chamber.
- ✓ With an infrared sensor type IRGA for the control of the CO₂ inside the growth area, without being affected by the humidity.

