



BIO

FITOCLIMA PRODUCTION ROOMS

MULTI-TIER PRODUCTION ROOMS,
FROM GERMINATION TO HARVEST



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aralab





ARALAB is a company specialized in designing, developing, manufacturing and servicing of high quality climatic chambers and controlled environment rooms.

Since 1985 we have been perfecting ways to create and control temperature, humidity, light, air flow and many other environmental conditions.

Only the highest quality components are used to manufacture our chambers so customers can have the best equipment for their research and testing purposes.

Control the Environment. Your Own Climate.



COMMON APPLICATIONS INCLUDE

- LEAFY GREENS
- MEDICAL PLANTS
- GERMINATION
- PROPAGATION
- CONSERVATION
- DRYING
- STABILITY STORAGE

KEY FEATURES

- Temperature, Humidity, Light intensity and Air Flow controlled with consistent precision through the years
- High ventilation capacity with adjustable air flow speed
- Lighting options to suite multiple requirements and stages of plant development
- All environmental conditions easily programmable with the new ClimaPlus® multicolour touchscreen interface
- All surfaces are washable
- Protection features with configurable high/low temperature and humidity alarms and automatic remote notifications





Certified ISO:9001 for its Quality Management System
 Certified ISO:14001 for its Environmental Management System

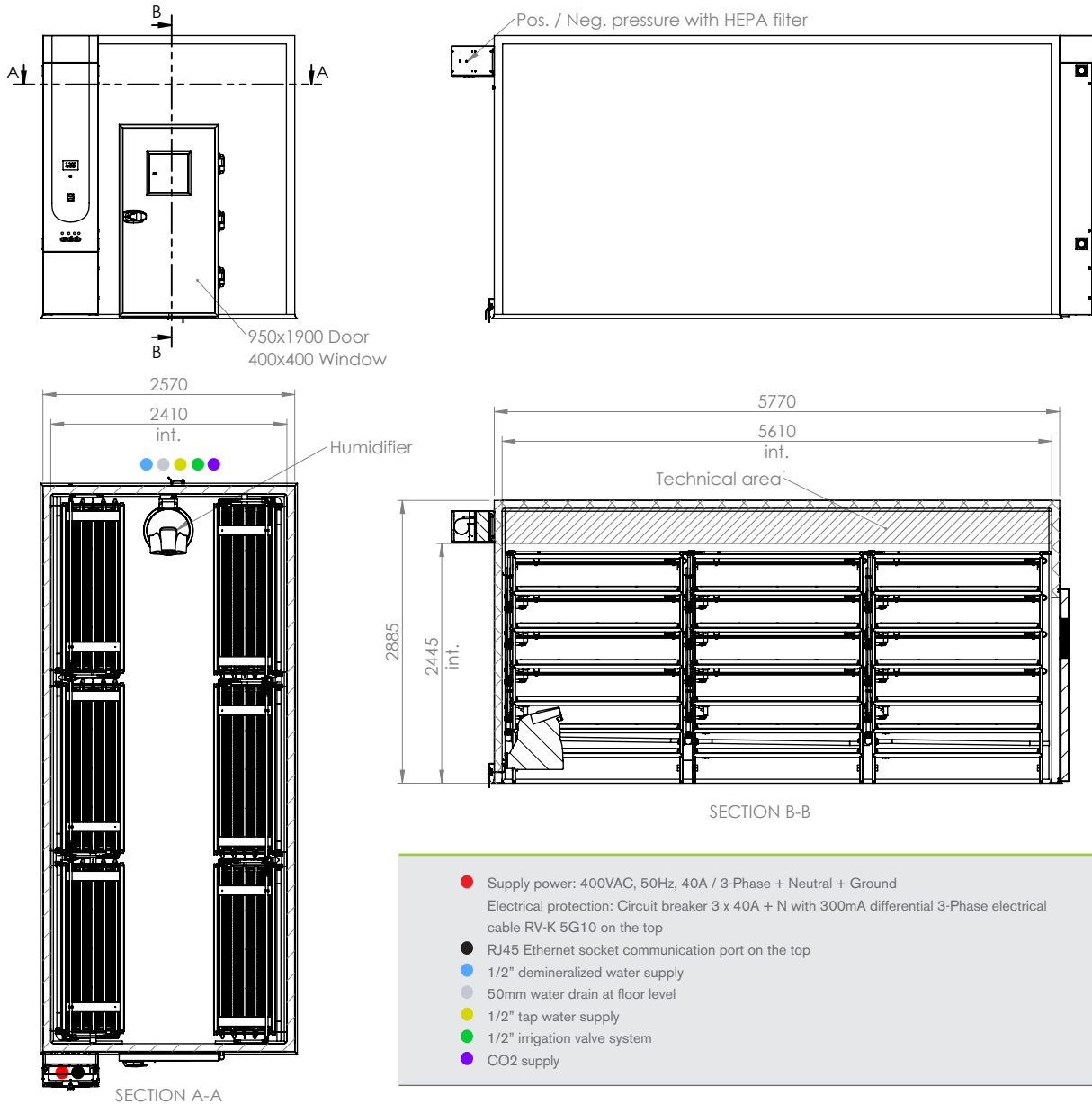


Example of FitoClima 32.000 Production Room for Leafy Greens

DIMENSIONS AND DRAWINGS

● ● ● ● FITOCLIMA 32.000 PLH PR (FOR LEAFY GREENS)

EXTERNAL DIMENSIONS (HxWxD) (mm)		2885 x 5770 x 2570
INTERNAL DIMENSIONS (HxWxD) (mm)		2445 x 5610 x 2410



Temperature range: 15°C to 30°C [other ranges possible]

Humidity range: 40% rH to 80% rH

6 Growth modules in total (3 on each side)

Each growth module with 4 tiers/levels: 3 with light control + 1 without light

Growth height per tier of approximately 250mm

Light intensity of approximately 250 $\mu\text{mol}/\text{m}^2/\text{s}$ (at 150mm)

CO2 control


HEPA filtration and positive/negative pressure

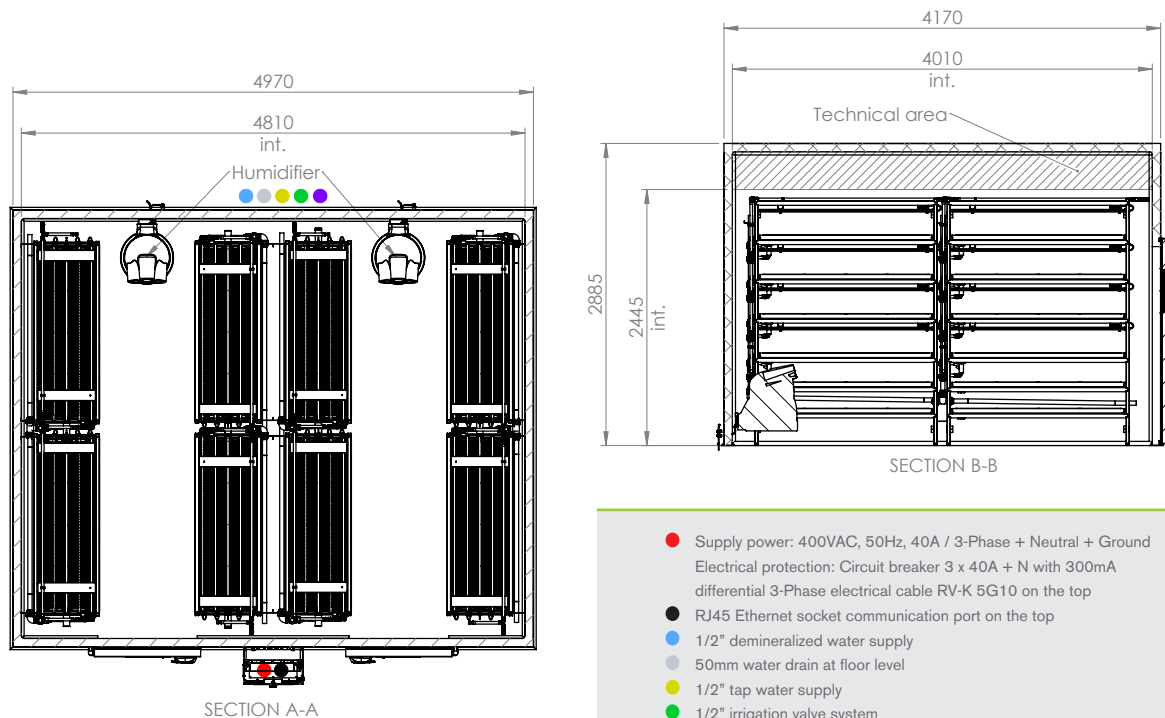
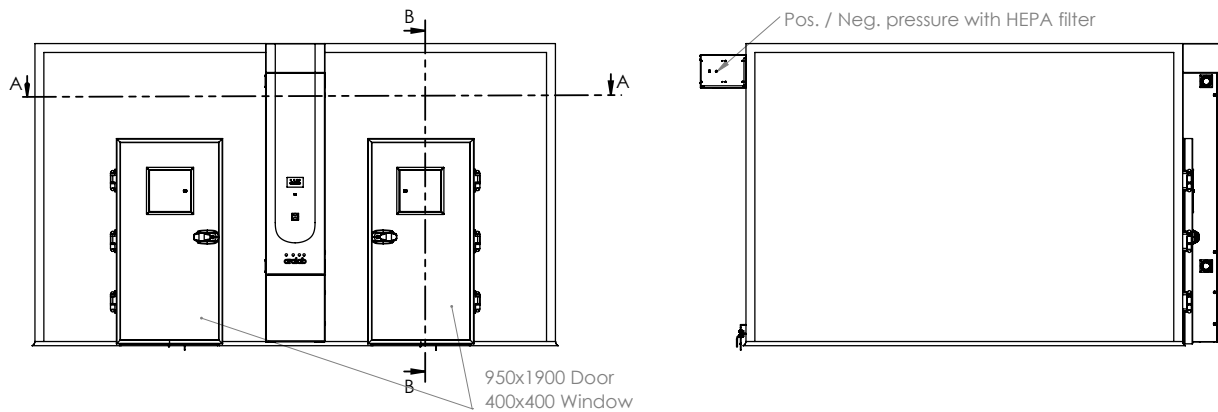
High ventilation capacity with adjustable air flow speed

PERFORMANCES AND CONFIGURATIONS CAN BE ADJUSTED TO MEET OTHER REQUIREMENTS

DIMENSIONS AND DRAWINGS

● ● ● ● FITOCLIMA 48.000 PLH PR (FOR LEAFY GREENS)

EXTERNAL DIMENSIONS (HxWxD) (mm)		2885 x 5770 x 2570
INTERNAL DIMENSIONS (HxWxD) (mm)		2445 x 5610 x 2410



- Supply power: 400VAC, 50Hz, 40A / 3-Phase + Neutral + Ground
Electrical protection: Circuit breaker 3 x 40A + N with 300mA differential 3-Phase electrical cable RV-K 5G10 on the top
- RJ45 Ethernet socket communication port on the top
- 1/2" demineralized water supply
- 50mm water drain at floor level
- 1/2" tap water supply
- 1/2" irrigation valve system
- CO2 supply

Temperature range: 15°C to 30°C

Humidity range: 40% rH to 80% rH

8 Growth modules in total

Each growth module with 4 tiers/levels: 3 with light control + 1 without light

Growth height per tier of approximately 250mm

Light intensity of approximately 250 $\mu\text{mol}/\text{m}^2/\text{s}$ (at 150mm)

CO2 control

HEPA filtration and positive/negative pressure

High ventilation capacity with adjustable air flow speed

PERFORMANCES AND CONFIGURATIONS CAN BE ADJUSTED TO MEET OTHER REQUIREMENTS

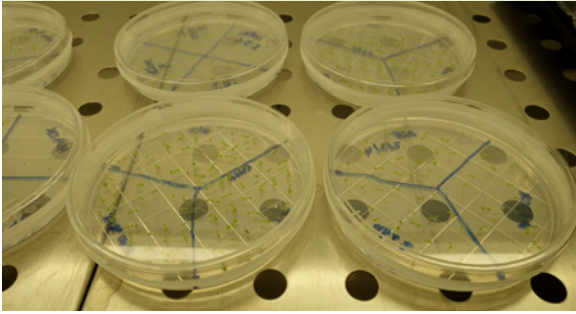


Example of FitoClima 30.000 Production Room for Cannabis Flowering

CONTROLLED ENVIRONMENTS FOR MEDICINAL CANNABIS

Aralab offers a wide range of reach-in and walk-in environmental chambers for all stages of Cannabis plant development, drying, and even for pharmaceutical stability testing.

PROPAGATION / NURSERY



MOTHER PLANTS / VEGETATIVE GROWTH



FLOWERING



DRYING AND CURING



STABILITY TESTING



ACCESSORIES

PLEASE CONSULT ARALAB FOR OTHER ITEMS

HEPA filtration and positive/negative pressure

CO₂ monitoring and control

Multiple lighting options, with different spectra and intensity

Light intensity control in $\mu\text{mol m}^{-2} \text{s}^{-1}$ with Quantum light meter

PVC Curtains

Slip resistant floor

Access ramp for trolleys

Custom doors

Ventilator filtration

Desinfection methods

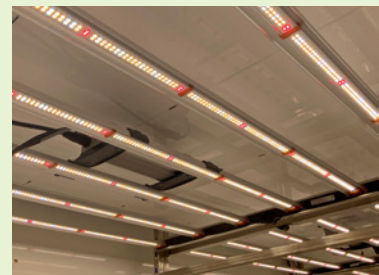
Hydroponic Irrigation module (3 nutrients + pH control)



Automated Irrigation



Custom Layouts and Dimensions



Application oriented LEDs



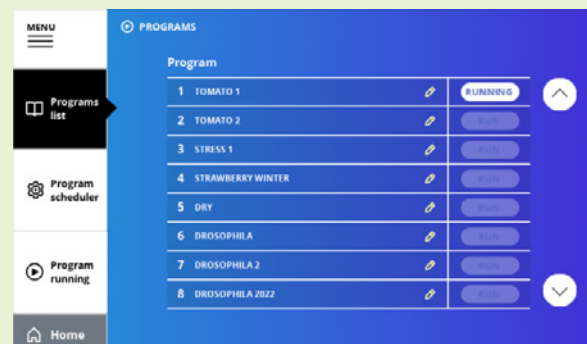
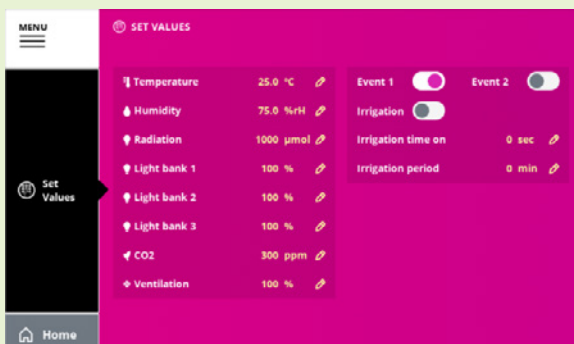
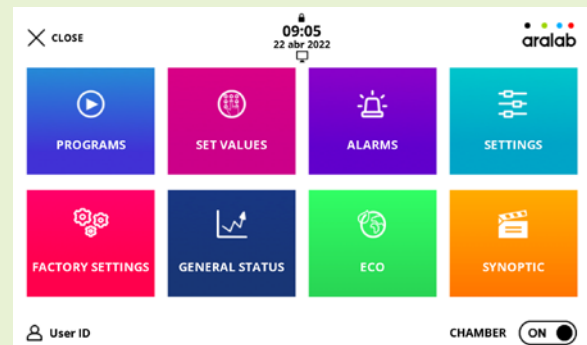
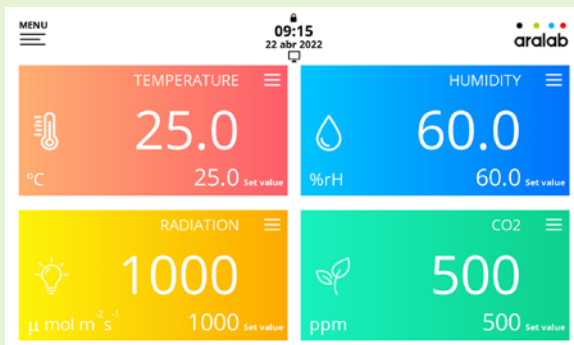
HEPA filtration



Hydrogen peroxide desinfection

CLIMAPLUS CONTROLLER HMI

- Programmable Logic Controller exclusively developed by Aralab for FitoClima chambers
- Easy to use touch-screen interface
- 90mm x 155mm (7 inch) multicolor display
- Controls every environmental variable available for any specific FitoClima model (Temperature, Humidity, Lights, Airflow, CO2 and connected external devices)
- Friendly program editor for creating 32 programs of 24 segments each, allowing the design of complex and comprehensive climatic simulation programs
- Password protection of the controller functions
- Content and research protection feature, with configurable High, Low and Band Temperature and Humidity alarms and automatic notifications
- Managing, monitoring and recording of all alarms
- Non-volatile memory, allowing the automatic restart of previously defined set-points or on-going programs due to power failure, without losing data
- Real-time monitoring of all the functions and active components of the equipment, allowing for a fast and accurate diagnostic in case of malfunction
- Possibility to control and program events by external commands and with external devices
- Secure Remote Access through ClimaPlus VNC Server
- Ethernet port for connecting logging computer to the chamber controller
- ClimaPlus controller functions also available at the PC/Laptop with the FitoLog software pack



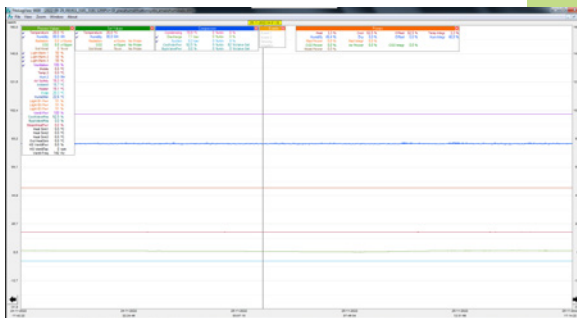
FITOLOG SOFTWARE

The FitoLog software pack is a set of applications designed to facilitate the managing, monitoring and recording of programs and data from the FitoClima chambers. It consists of 3 applications: **FitoLog**, **FitoLogView** and **FitoProgram**.



FITOLOG

Records and displays in real time all data and details related to the set-points, running variables and equipment behaviour. It also retrieves information about the active components of the chamber, running processes, errors, alarms and allows the configuration of periodic or alarm triggered remote notifications (by email or SMS, depending on existing connections and accessories).



FITOLOGVIEW

It is a working tool to process the data recorded by the FitoLog program. One can view, print and export the log contents to other file types, and analyse the data in other data management software (Excel, Star Office, Access or others).



FITOPROGRAM

This application simplifies the creation of programs and its integration on the chamber ClimaPlus controller. Up to 32 programs, each with 24 segments, can be designed and linked to create detailed environmental profiles and simulations.

RESEARCH SECURED WITH ALARMS, NOTIFICATIONS, FAST DIAGNOSTICS AND PROMPT TROUBLESHOOTING

With FitoLog it is possible to gather data from each of the chambers systems, which makes it a very useful tool to diagnose any necessary maintenance. This tool works as the "black box" of the equipment, giving Aralab technicians the necessary data to remotely carry out a fast and efficient diagnostic. All that is needed is a FitoLog file.

With optional FDA 21 CFR part 11 version for Pharmaceutical Grade Applications



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Control the environment
Your own climate