

TESTING FITOCLIMA 600 / 1200 PHCI

ENVIRONMENTAL TESTING CHAMBERS FOR CURING APPLICATIONS
(MORTAR, CEMENT, LIME AND PLASTER).

ASTM C511 Moist Cabinet





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.













KEY FEATURES

- Ready to use. No assembly needed
- Minimal footprint for efficient use of laboratory space
- Adaptive future proof design, with easily removable and height adjustable shelves
- Wide environmental performance ranges, enabling greater control of climatic conditions
- Optimal internal thermodynamics to ensure uniformity of climatic conditions
- Content and Research protection, with configurable high / low temperature and humidity alarms and remote notifications
- Stainless steel interior for maximum durability and easiness of cleaning
- Nonpolluting construction and cooling
- Equipped with ClimaPlus touch-screen controller
- DIN, EN, IEC, ISO, MIL, NP and UNE compliant













TECHNICAL SPECIFICATIONS AND PERFORMANCES

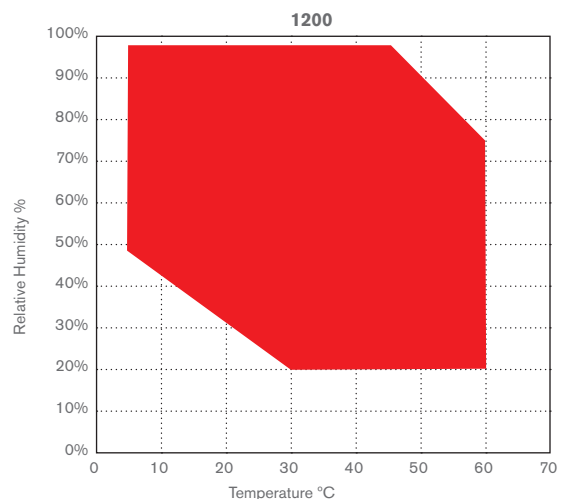
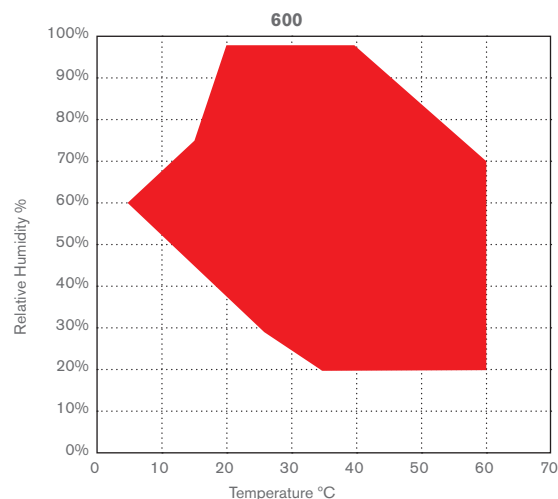
● ● ● ● FITOCLIMA 600 PHCI

TEMPERATURE RANGE		-5°C to 60°C
TEMPERATURE FLUCTUATION		± 0,5 °C
TEMPERATURE UNIFORMITY		± 1,0 °C
HUMIDITY RANGE		20% to 98% RH
HUMIDITY FLUCTUATION		± 2 % RH
HUMIDITY UNIFORMITY		± 2 % RH
SHELVES		4 shelves with 510mm x 640mm (up to 8 can be fitted)
WEIGHT LOAD PER SHELF (Reinforced SS shelves)		Up to 40kg weight load, evenly distributed
VOLUME		543 liters
ELECTRICAL SUPPLY		230V ± 10%; 50Hz; 5 Amp.

● ● ● ● FITOCLIMA 1200 PHCI

TEMPERATURE RANGE		-5°C to 60°C
TEMPERATURE FLUCTUATION		± 0,5 °C
TEMPERATURE UNIFORMITY		± 1,0 °C
HUMIDITY RANGE		20% to 98% RH
HUMIDITY FLUCTUATION		± 2 % RH
HUMIDITY UNIFORMITY		± 2 % RH
SHELVES		8 shelves with 510mm x 640mm (up to 16 can be fitted)
WEIGHT LOAD PER SHELF (Reinforced SS shelves)		Up to 40kg weight load, evenly distributed
VOLUME		1 194 liters
ELECTRICAL SUPPLY		230V ± 10%; 50Hz; 7 Amp.

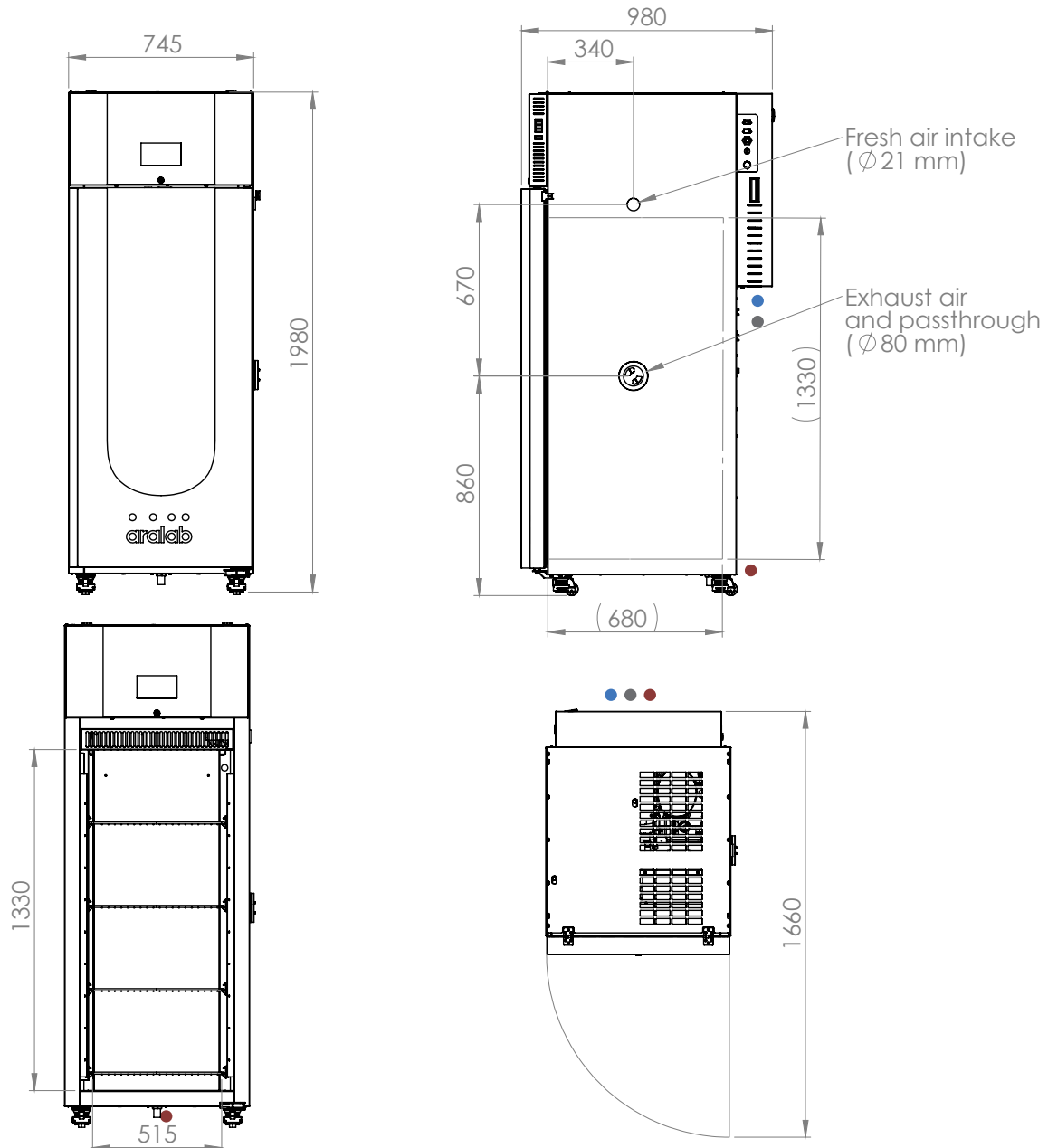
● ● ● ● TEMPERATURE & HUMIDITY WORKING RANGE



DIMENSIONS AND DRAWINGS

● ● ● ● FITOCLIMA 600

EXTERNAL DIMENSIONS (HxWxD) (mm)		1 980 x 745 x 950
INTERNAL DIMENSIONS (HxWxD) (mm)		1 330 x 600 x 680

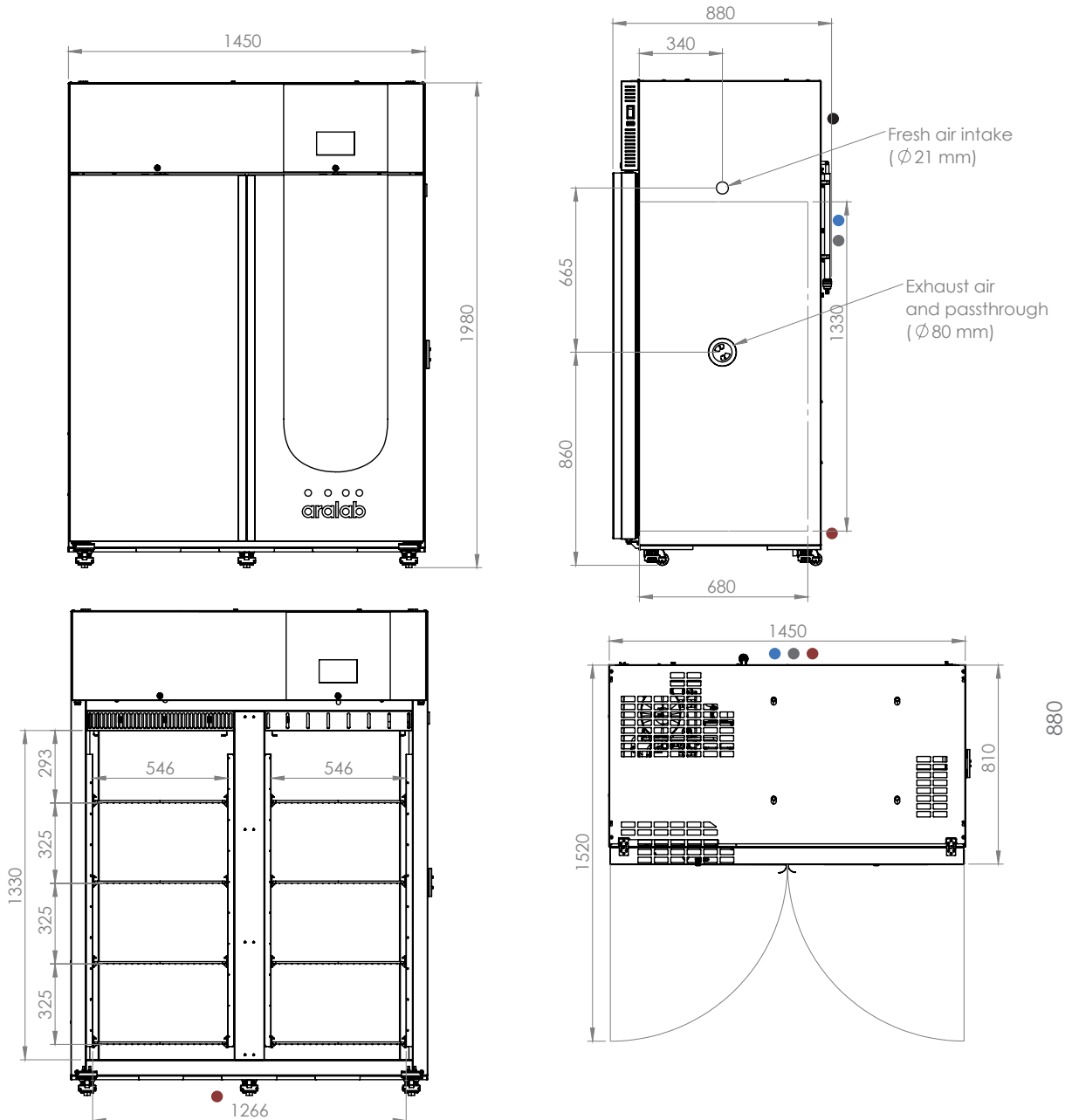


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|---|--|
| <ol style="list-style-type: none"> Standard refrigeration system is air cooled <ul style="list-style-type: none"> ● Services hub installation needs: ● ¾" male demineralized water supply valve
Conductivity: <50µS/cm , TDS <35PPM
Pressure: 1-5 Bar In case of reverse osmosis/cylinder (optional):
¾" male tap water valve connection
Pressure: 1-5 Bar ● 20mm water drain at floor level female connection | <ol style="list-style-type: none"> Electrical cabinet installation needs:
Supply power: 230VAC, 50Hz (60Hz upon request), 12A / Single Phase + Neutral + Ground
Electrical protection: Circuit breaker 16A + N with 30mA differential
● RJ45 communication port Equipment weight: 170Kg (approx.) Average heat dissipation: 0,3 kW |
|---|--|

DIMENSIONS AND DRAWINGS

● ● ● ● FITOCLIMA 1.200

EXTERNAL DIMENSIONS (HxWxD) (mm)		1 980 x 1 450 x 880
INTERNAL DIMENSIONS (HxWxD) (mm)		1 330 x 1 320 x 680



- Standard refrigeration system is air cooled (-20°C model is water cooled. See point 5.)
- Services hub installation needs:
 - ¾" male demineralized water supply valve
Conductivity: <math>< 50 \mu\text{S}/\text{cm}</math>, TDS <math>< 35\text{PPM}</math>
Pressure: 1-5 Bar
In case of reverse osmosis/cylinder (optional):
¾" male tap water valve connection
Pressure: 1-5 Bar
 - 20mm water drain at floor level female connection
- Electrical cabinet installation needs:
Supply power: 230VAC, 50Hz (60Hz upon request), 13A / Single Phase + Neutral + Ground
Electrical protection: Circuit breaker 16A + N with 30mA differential
● RJ45 communication port
Average Heat dissipation: 0,5 kW
- Equipment weight: 240Kg (approx.)
- Requirements for water cooled condenser for -20C model: Inlet: 15°C to 25°C and 3 to 5 Bar

EQUIPMENT DESCRIPTION



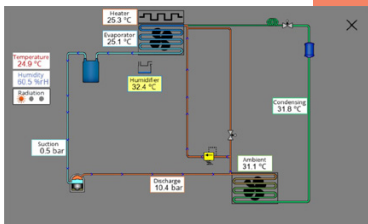
CONSTRUCTION & CONTROL

- Multi-color 7-inch touch-screen ClimaPlus© controller.
- Open door alarm with configurable time-out function.
- Highly resistant stainless-steel.
- Polyurethane insulation.
- Exterior zinc plated steel and gray epoxy paint.
- Pivoting door(s) with spring lock, magnetic gasket and safety lock(s).
- 4 and 5 built-in casters brakes.
- 80mm Ø side entry port.
- Maximum load per chamber: 600 model: 160Kg / 1200: 320Kg.



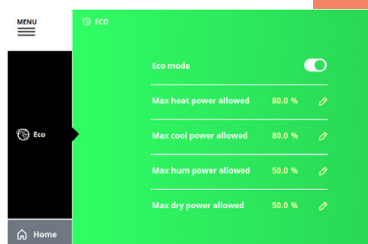
ENVIRONMENTAL CONTROL

- Air-cooled, mechanical refrigeration by hermetic compressor.
- Dual heating technology with hot gas by-pass and stainless steel electric heaters.
- Humidification with clean steam generator, allowing for accurate, long lasting and easy maintenance operations.
- Dehumidification by condensation on the cooling system evaporator.
- Models with 'Temperature and Humidity control' are equipped with Vaisala capacitive sensors; models with 'Temperature control only' are equipped with Resistive NTC sensor.
- Air renovation through adjustable lateral port-holes.
- Uniform air flow of approximately 0.2m/s across all shelves.
- Airflow speed adjustable on the ClimaPlus® controller.



RESEARCH PROTECTION AND AUTOMATIC DIAGNOSTICS

- Independent thermostats for maximum and minimum temperature limits.
- Automatic cut-off function, in case of excessive heating or cooling.
- Configurable maximum and minimum temperature and humidity limits.
- Visual and audible alarms for temperature and humidity limits.
- Synoptic: a self-diagnostics tool that checks all active components of the system, allowing for faster procedures and minimizing any possible downtimes.



ECO MODE

- The ECO Mode button turns on new power saving features.
- By decreasing some power related activities (depending on set-point conditions), the energy consumption can decrease, translating in cost savings.

CLIMAPLUS HMI CONTROLLER

Programmable PLC exclusively developed for ARALAB chambers.

Multi-language, easy-to-use touch-screen interface (EN, FR, DE, IT, PT, ES and other languages on request).

Resolution of 0,1°C for Temperature and 0,1% for Relative Humidity.

High performance temperature and humidity control with value correction in all ranges.

Capability for creating 32 programs of 24 segments each.

Internal non volatile memory for storing test data.

Automatic restart of tests due to power failure, without losing data and restarting test where it was interrupted.

Real-time monitoring of all functions and control of equipment.

Manage control settings via MODBUS/TCP.

Possibility of programming a delay of the beginning of test.

Monitoring and recording of all alarms.

Possibility of performing events by external commands.

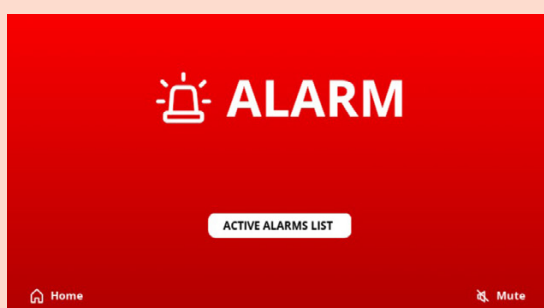
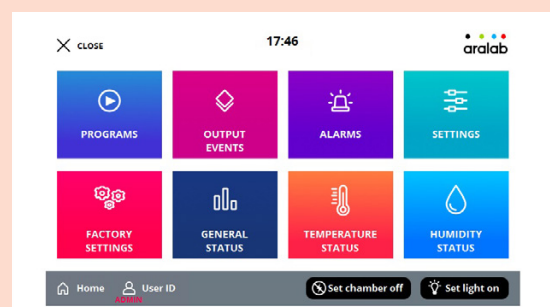
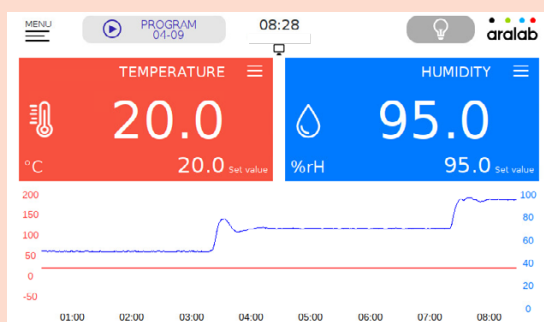
Several outputs for connecting computers or other devices.

Alarms management.

Graphic representation of the tests and conditions.

Remote access through VNC server.

Possibility of running computer test programs and export them to the controller.



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 TESTA chambers. It consists of 3 applications: **FitoLog**, **FitoLogView** and **FitoProgram**.



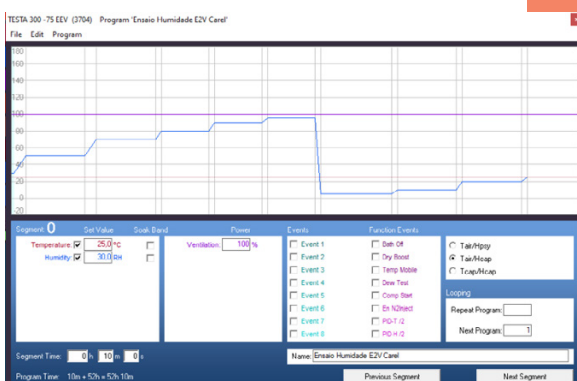
FITOLOG

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 CiimaPlus controller. Up to 32 programs, each with 24 segments, can be designed and linked to create detailed environmental profiles and simulations.

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.

ACCESSORIES

OPTIONAL ACCESSORIES

FitoLog / FitoView software for data monitoring, logging and programs configuration on the PC.

Ethernet cable for PC connection.

CO₂ Controlling and monitoring system.

Wall mounting conductivity meter, for water quality control, with assembling accessories.

Water Demineralizer.

20 liter water tank with electric pump and security valve.

Glass door with double glazing.

Additional Stainless steel wire shelves.

Reinforced shelves for heavy samples.

ACCESSORY FOR ACCELERATED RADIATION AGING

8 fluorescent and UV lamps will decrease climatic control range, when lights are ON.

ACCESSORY FOR CARBONATION

CO₂ Controlling and monitoring system.

Reading range: 0 to 20% or up to 5.000 PPM.

Accuracy: At 5% CO₂ ±0.1% CO₂
At 5 to 8% CO₂ ±0.2% CO₂
At 8 to 20% CO₂ ±0.4% CO₂

Features and specifications are subject to change. Aralab continuously studies ways to further develop its products to achieve better performances and overall product quality. As a result, characteristics and specifications provided in this document may be subject to changes.

Let's meet!

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Control the environment

Your own climate