FitoClima 600 PDH

Climatic Chamber specially developed for reaching low humidity levels

YOUR OWN CLIMATE

Aralab

ARALAB is a company specialized in design, development, manufacturing and after-sales service in Temperature and Environmental Chambers for research and testing applications.

Since 1985 we specialized in controlling temperature, humidity, lights, air flow and other required environmental testing conditions.

At ARALAB we integrate only the highest quality components available in the market to manufacture our chambers. And all in conformity with our ISO:9001 certification.

ARALAB chambers have been developed to meet the most demanding international standards.

Key Features

- Wide environmental performance ranges, enabling greater control of climatic conditions
- Optimal internal thermodynamics to ensure uniformity of climatic conditions
- Flexible, future proof chambers, designed for numerous applications
- Modular design, allowing different testing requirements
- Easy to use and maintain
- Nonpolluting construction and cooling
- Equipped with ClimaPlus touch-screen controller
- DIN, EN, IEC, ISO, MIL, NP and UNE compliant

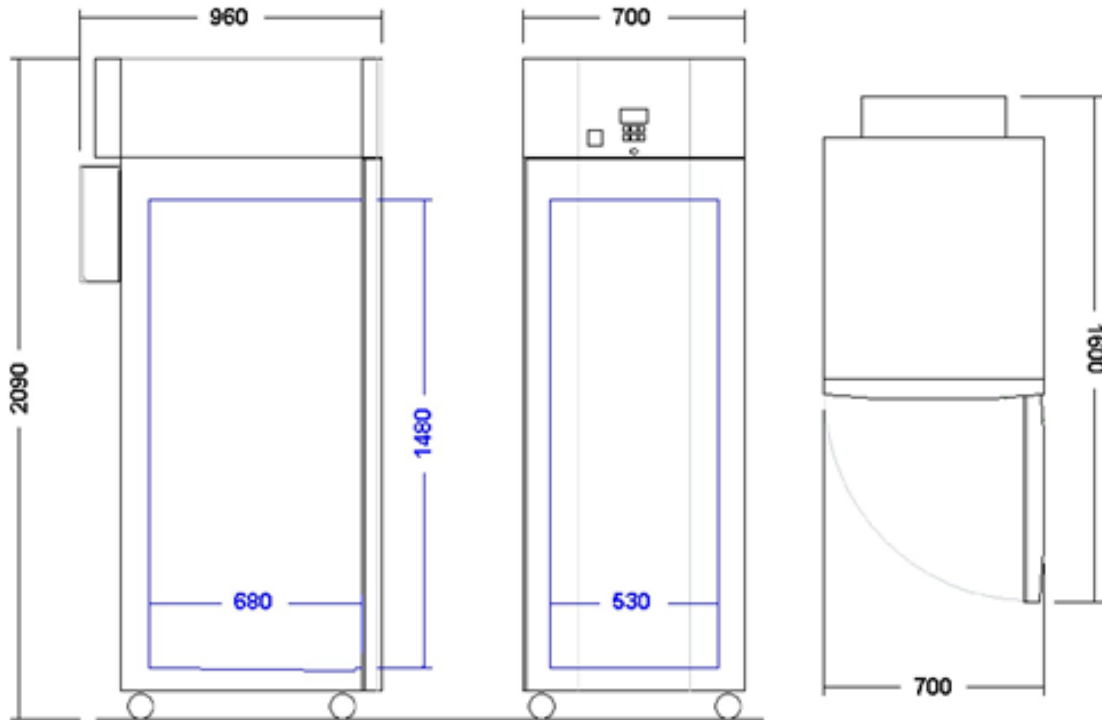## Low Humidity / Drying chamber

With Aralab highly advanced drying system, these chambers guarantee an unsurpassed stability of cool and dry conditions, making them perfect for drying purposes. The *PDH* chambers maintain their flexibility by allowing a wide temperature range for other demands and future needs.

Temperature & Low humidity chambers (PDH model)	S600 PDH
Temperature Range	5ºC to +45ºC
Stability	± 0,5 ºC
Uniformity	± 1,0 ºC
Humidity Range	Ambient down to 5% RH
Stability	± 1 % RH
Uniformity	± 2 % RH
Shelves included (530 mm x 630 mm)	4
Additional shelves (optional) *	+4 (up to 8 shelves total)

* consult available accessories

![aralab logo]

FITOCLIMA 600 PDH	
EXTERNAL DIMENSIONS (HxWxD) (mm)	2.090 x 700 x 960
INTERNAL DIMENSIONS (HxWxD) (mm)	1.480 x 530 x 680

Technical Characteristics, Software & Accessories

Construction

- Monobloc design, with polyurethane insulation and stainless-steel interior and exterior
- Front panel with Zincor steel and gray epoxy paint
- Pivoting door with spring lock, magnetic gasket and safety lock
- 4 casters with built in brakes
- 50mm diameter side port

Temperature and Humidity control

- Electronic capacitive humidity sensor
- Low-noise, air based, CFC free mechanical refrigeration by sealed condenser group
- Dehumidification by condensation of the cooling system evaporator
- Heating by stainless steel electric heaters

- Thermal safety with maximum and minimum temperature limits controlled by independent thermostats with incorporated alarms
- Air-flow forced by sealed fans with electronic switching
- Air renovation through adjustable breathing holes

Air Flow

- Air-flow forced by sealed fans with electronic switching
- Air renewal through adjustable port-holes

Control Panel

On the top of the chamber and equipped with:
- CLIMAPLUS 400 Programmable Controller
- Safety High / Low thermostat, audible alarm

Communications Panel

On the left side of the chamber:

- RS232 interface for PC connection
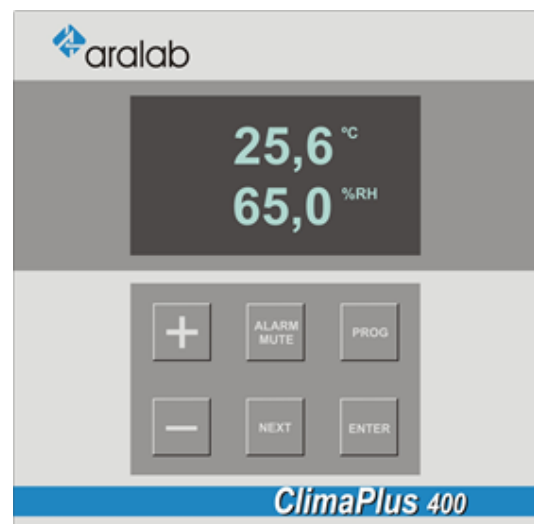- Extra input for remote alarm connection

S600 PDH with 4 stainless wire shelves

Controller

The Fitoclima Bio chambers are equipped with the ClimaPlus controller with dual microprocessor technology for controlling, monitoring and registering all operating data.

- Programmable PLC **ClimaPlus** developed for Aralab PDH chambers
- Non-volatile memory
- Configuration of up to 32 climatic programs with 24 different segments
- 0,1ºC temperature resolution
- 0,1% HR humidity resolution
- Managing and monitoring alarms
- Possibility of integrating external commands and devices with ClimaPlus controller
- RS232 output for connecting devices
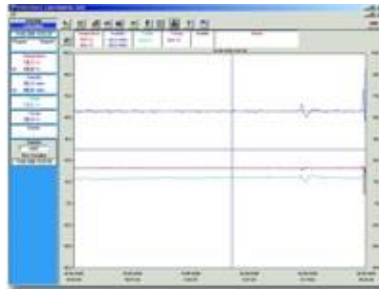- Password protection of controller functions

Software

```
STATUS
LOGGING
04-02-2005 14:38:10

Program          Segment
2        RUN          0

Temperature
25,0 °C
SP   25,0 °C

Humidity
60,1 %RH
SP   60,0 %RH

Bath
23,3 °C

T-RHS
25,2 °C

Events
. . . . . . . . . . . . .

Outputs
. . . . . . V . . . . . . . . .

Samples
5324

Next Sampling
04-02-2005 14:38:13
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The **FitoLog** software is a set of applications designed to monitor and register data from the chambers processes variables.
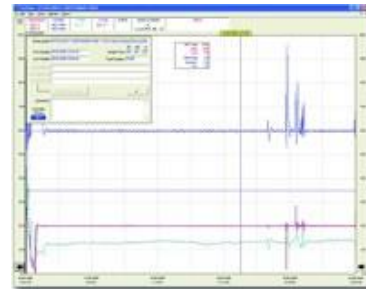
The software consists of 3 applications: **FitoLog**, **FitoView** and **FitoProgram**.

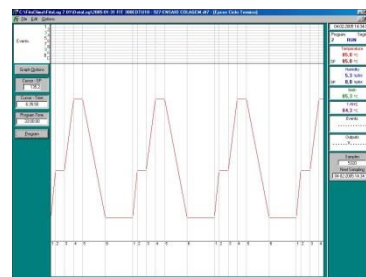**FitoLog**   **FitoView**

(data acquisition, software view)   (graphic overview of the tests)

FitoLog: Displays and records in real time all the data and details of the measurements and respective set-points in a file. It also retrieves the data of process variables, errors, alarms and allows external alerts configuration, which may include Email or SMS to report the condition of the equipment or warnings of alarms.

FitoView: It is a working tool to process the data acquired by FitoLog. You can view, print and export to other file types, and analyze the data in other programs (Excel, Access or others).

FitoProgram: This application allows the designing of test programs and its integration on the chamber controller.

With **FitoLog** it is possible to gather data from each of the chambers subsystems, which makes it a very useful tool to diagnose any necessary maintenance. This tool is the "Black Box" of the Chamber, giving our technicians the necessary data to remotely carry out a fast and efficient diagnostic. All that is needed is a log file with the occurrence, which can be analyzed by Aralab technicians in less than an hour.

Other optional Accessories

- FitoLog / FitoView software for data monitoring, logging and programs configuration on the PC
- RS232 cable for PC connection
- IRGA CO2 Controlling system
- Glass door with double glazing
- Stainless steel wire shelves

Installation Requirements

To assure a correct functioning of the chamber, the following installation conditions are required:

Installation site
The place should be easily accessible, according to equipment dimensions and weight. It should have good air circulation and a room temperature between 10º and 26ºC. The floor should be leveled and a minimum distance of 50cm from the walls of other equipment must be kept.

Electrical supply
Near the equipment with the specified requirements.

Humidification circuit and demineralized water (for models with Humidity)
The humidification circuit works exclusively with distilled or demineralized water. For this circuit, a water admission pressure of 1 to 6 bares and conductivity of ≤ 5µ Siemens is required.

Drain
At floor level and near the equipment. The draining of the humidification and cooling systems water is done by gravity. For a correct draining there should be a minimum inclination of 10º in a descending trajectory from the chambers draining pipe until the sewage system.

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Our main goal