TESTA_e MINI

BENCHTOP TEMPERATURE TEST CHAMBERS

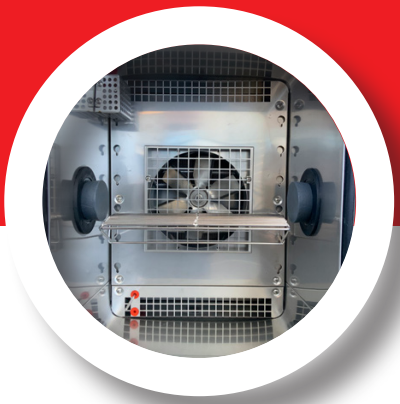
aralab

ARALAB is a company specialised 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.



Testa_e temperature testing chambers offer precise and reproducible conditions for climatic and temperature testing in many industries.

COMMON APPLICATIONS INCLUDE:

- ENVIRONMENTAL TESTING
- ELECTRONICS, AUTOMOTIVE, AEROSPACE,
- BUILDING MATERIALS, MILITARY EQUIPMENT, MATERIALS IN GENERAL RESEARCH
- QUALITY CONTROL
- PRODUCTION FACILITIES

CERTIFIED
ISO 9001
ISO 14001

KEY FEATURES

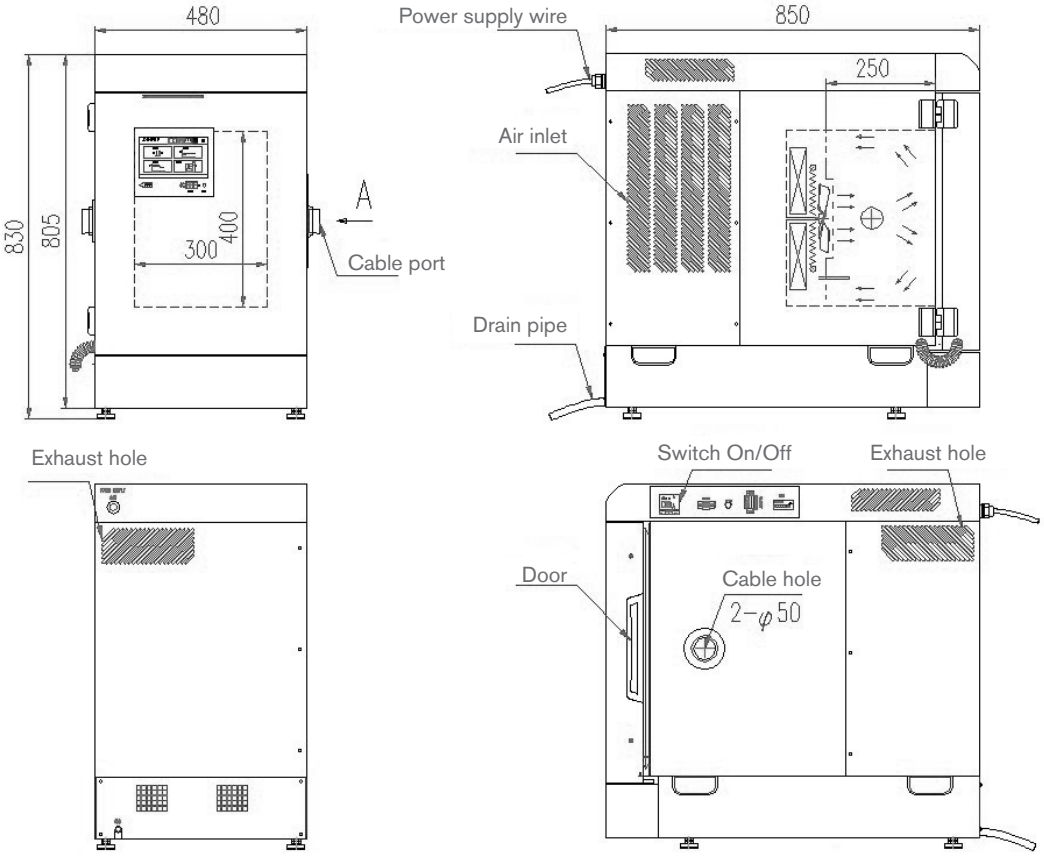
- The most advanced technology in climate control
- Internal aerodynamic optimisation to ensure uniformity of conditions
- Time saving features with easily configurable testing programs that can run, start and stop automatically
- Highly resistant stainless steel interior for maximum durability and easy cleaning
- Flexible interior with height adjustable and removable stainless steel shelves
- Nonpolluting construction and cooling system
- Compliant with international standards and requirements EN, IEC, DIN, ISO, NP and UNE

SPECIFICATIONS

TEMPERATURE RANGE		-65°C to +150°C
TEMPERATURE FLUCTUATION		± 1°C
TEMPERATURE DEVIATION		± 2.0°C (temperature ≤ 100°C); ± 3.0°C (temperature > 100°C)
HUMIDITY RANGE		-
HUMIDITY DEVIATION		-
TEMPERATURE HEAT-UP RATE		-65°C to +150°C; ≤ 40min
TEMPERATURE PULL-DOWN RATE		+20°C to -60°C; ≤ 50min

DIMENSIONS AND DRAWINGS

EXTERNAL DIMENSIONS (HxWxD) (mm)		805 x 480 x 850
INTERNAL DIMENSIONS (HxWxD) (mm)		400 x 300 x 250



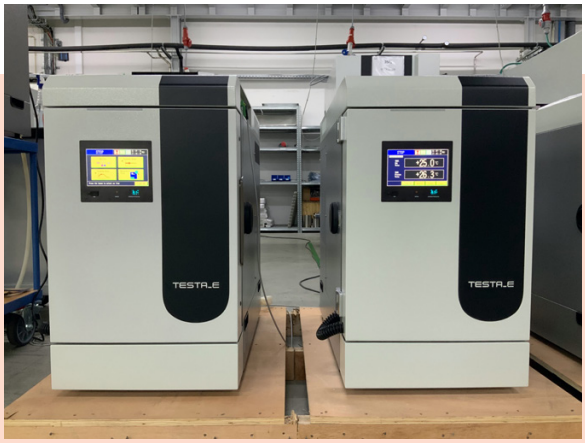
INSTALLATION REQUIREMENTS

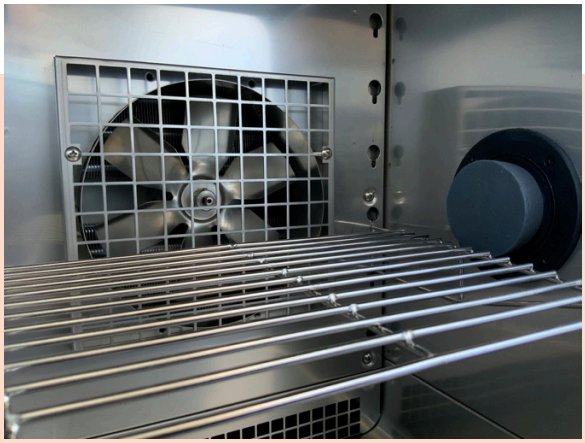
POWER SUPPLY	• AC220V/50Hz ±10% single-phase + protective grounding wire • (50±0.5)Hz • The earth resistance of protective grounding wire is less than 4Ω; • Users are required to provide air or power switches with appropriate capacity for equipment at the installation
POWER SUPPLY CAPACITY	• 2.3kW
MAXIMUM CURRENT	• 12 A

EQUIPMENT DESCRIPTION

CONSTRUCTION

INSULATION ENCLOSING STRUCTURE	• Outer wall: two-sided galvanized steel sheet with plastic-sprayed surface • Inner wall: SUS304 para AISI 304 • Thermal insulating material for chamber body: polyurethane foam + glass wool • Thermal insulating material for door: glass wool
AIR CONDITIONING CHANNEL	• Axial fan • Evaporator (dehumidifier), humidifier • Overheat protector • Water supply and drainage port dry boil protector • Heater • Dry-bulb temperature transducer • Wet-bulb temperature transducer, wet-bulb sink
DOOR	• Single hinged door with the hinge at the left side and knob on the right side • Dew-prevention device on window frame or door frame.
CABLE PORT	• Oblong cable port: Ø50mm x 2, each at the left and right side of the chamber.
Control Panel	• Controller display, Operation button, over-temperature protection setting device, USB interface
MACHINERY ROOM	• Refrigeration unit, water pan, drainage hole, condenser fan • Motor for adjusting channel
DISTRIBUTION CONTROL CABINET	• Leakage circuit breaker for general power supply • Distribution panel • Measuring device (ADDA) • Input & output (I/O) board • Power-off protection device for distribution panel • Hour meter • RS-485 interface • RJ-45 Ethernet interface • Sample power supply control terminal
SAMPLE SHELF & BRACKET	• Test sample shelf: 2 stainless steel shelves, load capacity (uniformly distributed): 1kg for each.





REFRIGERATION SYSTEM

WORKING MODE	• Mechanical single refrigeration system (Air cooled)
REFRIGERATION COMPRESSOR	• Hermetically sealed low-noise piston compressor
CONDENSER	• Finned plate heat exchanger
EVAPORATOR	• Finned plate heat exchanger (Dehumidifer)
THROTTLING DEVICE	• Capillary & Electronic expansion valve (stepping motor driver)
REFRIGERATING MACHINE CONTROL METHOD	• The control system will automatically adjust the working condition of refrigeration machine in accordance with test conditions. • refrigeration system Compressor return air cooling circuit • Evaporative pressure adjustable valve
REFRIGERANT	• Testa_e Mini TT30 E65: R449A + R23

CONTROLLER

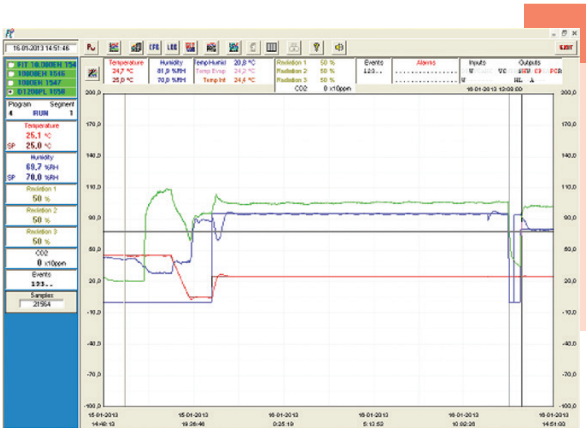
DISPLAY	• 7 inches, 800X480 dot matrix, TFT 64k color LCD display
OPERATING MODE	• Program mode: fixed value mode
SETTING MODE	• English menu; input via touch screen
PROGRAM CAPACITY	• Editable programs • Quantity: 20 max • Steps: 1000 max • Cycles: each step has a maximum of 20 cycles (each cycle step has a maximum of 99 cycles); • Fixed: 10 programs that can be linked
SET RANGE	• Temperature: adjust according to the temperature range of the equipment (Upper limit: +5°C; Lower limit: -5°C)
SET &DISPLAY RESOLUTION	• Temperature: 0.1°C • Time: 0.1min
INPUT	• Thermocouple • Platinum resistance, voltage, current, etc., if the equipment needs
COMMUNICATION INTERFACE	• RS-485 interface • RJ-45 Ethernet interface (IEEE802.3i/3u/3ab, 100Mbps)
INTERFACE CONVERTOR (OPTION)	• RS-232 interface: RS-485/ RS-232 convertor • GPIB interface (IEEE 488.2): RS-485/GPIB convertor
COMMUNICATION PROTOCOL	• STEN Communication protocol
CONTROL MODE	• Anti-integral saturation PID • BTC (for temperature test equipment) • BTHC (for temperature and humidity test equipment)

CURVE RECORDING FUNCTION	• RAM with battery protection can save the set values, sampling values of equipment, and the time of sampling instant. The maximum recorded time is 350 days (when sampling period is 1.5min).
	• The test curve data recorded by controller is:
	  • 2 channel temperature: set temperature and measured temperature
	  • 2 channel humidity: set humidity and measured humidity.

AFFILIATED FUNCTION	• Malfunction alarm, cause and treatment indicating function; power failure protection function; highest and lowest temperature protection function; • Calendar timing function (automatic startup and shutdown) • Self-diagnosis function

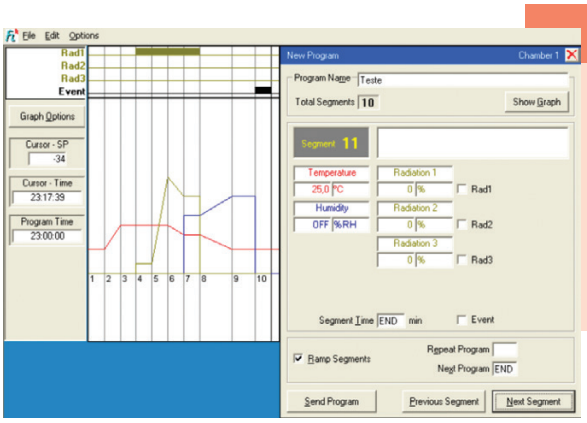
FITOLOG SOFTWARE

The FitoLog software pack is a set of applications designed to facilitate the monitoring and programming 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.



FITOPROGRAM

This application simplifies the creation of programs and its integration on the chamber ClimaPlus controller. Up to 20 programs, each with 50 segments, can be designed and linked to create detailed environmental profiles and simulations.

ACCESSORIES

- Additional shelves
- Observation window
- Instrument vehicle/table (850mm X 400mm) with casters

Let's meet!
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Control the environment

Your own climate