



TECHNICAL SPECIFICATIONS

FEATURES SP AND MEDITEST	SP				MEDITEST	
	90	330	540	1000	600	1300
Temperature range	0°C to +60°C				0°C to +60°C	
Relative humidity range regulated	5% HR to 95% HR				25% HR to 90% HR	

ELECTRICAL						
IP Protection level	IP55 front façade				IP55 front façade	
Power	208/230V-50/60Hz-10A				208/230V-50/60Hz-10A	
Rated power (W)	900	1600	2200	2600	1650	2400

EXTERIOR DIMENSIONS						
Width (mm)	830	960	1080	1250	765	1530
Height (mm)	1190	1770	1870	2140	1990	1990
Depth (mm)	520	670	820	920	800	800
Rear (mm)	100	100	100	100	100	100
Side clearance (mm)	-	-	-	-	-	-

INTERIOR DIMENSIONS						
Absolute volume (l)	90	330	540	1000	600	1350
Width (mm)	460	600	700	1000	625	1400
Height (mm)	470	1000	1000	1250	1440	1440
Depth (mm)	400	550	700	920	670	670
Series of shelves	2	2	2	2	4	2x4
Packing (kg)	155	208	286	360	300	300
Weight (kg)	132	185	255	332	190	190

The pioneer of the temperature control

- 1918 – Creation of the Couprie Company, the origin of our current activity
- 1920 – First centrifuge
- 1925 – First baby warmer for premature baby
- 1926 – First poupinel (sterilizer)
- 1927 – First bacteriological incubator
- 1948 – First low temperature equipment
- 1970 – First -86°C (-123°F) deep freezer
- 1979 – First Component Thermal Conditioner -80°C/+250°C (-112°F/+482°F)
- 2008 – First vented incubator with a disinfection cycle
- 2009 – Introduction of the predictive Intellidiag® system on -45°C/-86°C (-49°F/-123°F) deep freezers
- 2010 – First refrigerated vented incubator with a 160°C/2h30 disinfection cycle (320°F/2.50h)

Since 2009, **FROILABO** is a member of the Techcomp Group alongside other scientific manufacturers such as Precisa Gravimetrics in Switzerland. With more than 100 years of experience in temperature and humidity control, **FROILABO** offers a product range from -86°C to 250°C (-123°F to -148°F) with precision and homogeneity rarely achieved by other manufacturers and in accordance to the only European norm in force: **EN60068-3-11**. Using a FROILABO product keeps samples safe as well as the operator and protect the environment.

Our commitment to the environment is daily and is expressed by the selective use of "noble" material (stainless steel inner chamber), the use of recycled material (electroplated external case) and the recycling of all waste.

All **FROILABO** equipment is created and developed in France.



CLIMATIC CHAMBERS



CLIMATIC CHAMBERS

Moisture is a variable parameter, whose influence is important in a number of physical, chemical or biological processes.

The **FROILABO** environmental chambers can perform almost all temperature and humidity testing processes: drying, aging acceleration, stability testing, electrical testing...

To validate the performance of these operating principles and validate the chambers after manufacture, **FROILABO** has developed powerful metrology tools. These are connected to national standards, is similar to that used by accredited testing laboratories which allow for the characterization of our chambers according to the principles defined by the Aerospace Industry (Standard Aero 681 RE 01).

The Meditest environmental chambers can meet the specific requirements of stability tests in the pharmaceutical industry (ICH standard) but also to test conditioning and aging.

This generation of environmental chambers has many advantages in terms of performance and standard equipment.

The Meditest **FROILABO** comply with AFNOR NFX 15-140.



Precision for life

Froilabo SAS, 5 avenue Lionel Terray
69330 Meyzieu - FRANCE
Tél. : +33 4 78 04 75 75 - Fax : +33 4 78 04 75 76
www.froilabo.com - froilabo@froilabo.com

DISTRIBUTOR:

Ce document n'est pas contractuel, nous nous réservons le droit d'apporter des modifications sans préavis.



SP

Meditest

SP models are Hot - Cold - Humidity. They regulate the temperature between 0 ° C to 60 ° C and the relative humidity 5% to 95%. They therefore can perform almost all temperature and humidity tests: drying, aging acceleration, stability testing etc ...



The Meditest environmental chambers meet the test conditions of stability for pharmaceuticals (ICH) but also for testing product conditioning and aging.



RANGE HOT / COLD / HUMIDITY

- Control range: 0 ° C to + 60 ° C
- Modular Relative Humidity 5% 95%
- Demineralized water supply 10 litre tank
- Refrigeration consists of a group of hermetic refrigeration, an air or water condenser depending on the model type and refrigerant HFCR134A (CFC)
- PT sensor 100 ohms comply with IEC 751 Class A
- Capacitive sensor for humidity, allowing direct measurement of relative humidity in the enclosure
- Steam generation by ultrasonic system
- Double PID controller with digital display and real-set temperature to 1 / 10th of a degree
- Supplied with 2 shelves supporting 20kg each
- Cable entry 35mm on the right side of the unit
- Vertical forced convection (provided by 1,2 or 4 tangential fans 450 m3 / hour depending on model)

SP climatic chambers all come with a moisture trap for widening the chamber operating range.

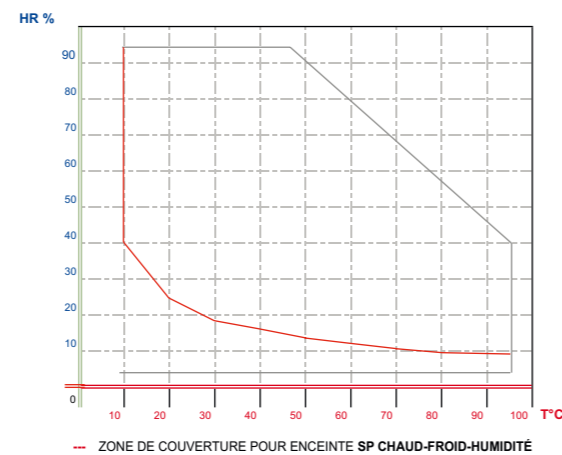
- The chamber is made of stainless steel (standard Z2CN1809), seamlessly welded to ensure a perfect watertight enclosure for water and vapour
- Double silicone gasket ensures perfect thermal insulation between the door and the room
- Outer shell galvanized steel and epoxy paint
- Insulation glass wool (60mm thick)
- Mounted on wheels, 2 lockable
- Sub-tight? interior glass door
- Warranty 24 months

To order

Absolute dimension	90L	330L	540L	1000L
SP	SP90	SP330	SP540	SP1000

SP OPTIONS

- A power supply system in deionized water or by automatic cartridge
- 50mm cable duct (instead of 35mm)
- Power supply 380 V three-phase + with or without neutral / 50Hz for SP1000
- RS485 port for connection of temperature controllers and humidity to a PC and save and manage data remotely
- 4 or 16 segments Programming for complex climatic variations
- Electronic Recorder 1 or 2 channels
- Keylock
- Dry contact for external alarm
- Lighting Point
- Additional shelves reinforced or not, max load 40kg
- Characterization of the enclosure by an official body
- Inspection window in the door



MEDITEST RANGE

- Temperature range: 0 ° C to + 60 ° C
- Relative Humidity range of regulated: 25% to 90% RH

Norme ICH Guideline Q1A	Homogénéité par couples température/humidité	Performances qualifiées selon la norme NFX 15-140
Stabilité long terme 12 mois	+ 25°C 60%HR + 30°C 60%HR	+/- 2°C +/-5%HR
Vieillessement accéléré 6 mois	+ 40°C 75%HR	+/- 2°C +/-5%HR
Conditions intermédiaires	+ 30°C 60%HR	+/- 2°C +/-5%HR
Test pour les semi-perméables		
Stabilité long terme	+ 25°C 40%HR	+/- 2°C +/-5%HR
Vieillessement accéléré	+ 40°C 25%HR	+/- 2°C +/-5%HR

GENERAL FEATURES

- 2 PID controllers with dual display and a dual high and low temperature alarm integrated
- Ultrasonic humidity generator provides a rapid recovery to preset moisture levels during door opening
- Keylock
- Safety thermostat 3.1 for sample protection
- Optimized air circulation guarantees excellent chamber temperature uniformity and stability
- Stainless steel interior for easy cleaning and decontamination operation
- 4 shelves as standard
- 4 wheels, 2 with brakes facilitating the movement of the enclosure (6 and 3 for 1300)
- Cable outlet diam. 35mm on the right side
- Visual alarm water level
- Visual alarm temperature fault
- Automatic feed to connect to the water supply demineralized
- Warranty 24 months

MEDITEST OPTIONS

- Audible alarm of water shortage
- Audible alarm temperature fault, alarm report
- Audible alarm humidity default
- Exterior door two leaves
- Electrical socket in the enclosure
- Scheduler 16 segments
- Additional temperature sensor for traceability
- Additional humidity sensor for traceability
- Electronic temperature recorder mounted two-way front
- Deionized water supply system by manual 10 litre reservoir
- Automatic feeding system with demineralised water by disposable bottles with resin filter
- Material characterization by a notified body in accordance with standard AFNOR NFX 15-140
- Additional stainless shelves

To order

Absolute dimension	600L	1200L
Meditest	MEDI600	MEDI1300

