



**AUTOCLAVES FOR  
STERILIZATION**



# AUTOCLAVES

## STEAM STERILIZATION AUTOCLAVES

RAYPA autoclaves are manufactured according to the following directives and rules:

- 97/23 CE*.- Directive pressure equipments. CE marking.
- EN-61010-1*.- Safety requirements of electrical equipments of control measure and use in laboratory. Part 1: General requirements.
- EN-61010-2-041*.- Safety requirements of electrical equipments of control measure and use in laboratory. *Parte 2-041*.- Particular requirements for autoclaves that use steam for the treatment of medical use materials, and in the laboratory processes.
- EN-50081-1*.- Electromagnetic compatibility. Emission general rule.
- EN-50082-1*.- Electromagnetic compatibility. Immunity general rule.



## STEAM STERILIZATION

The word sterilization means the total destruction of microorganisms, including the most resistance bacteria.

The sterilization through saturated steam is the most usable method, applicable to all those materials that are able to bear with heat and humidity.

To get a perfect balance between the sterilization temperature and the pressure of the saturated steam, the air must be evacuated efficiently from inside the autoclave's chamber.

RAYPA® autoclaves use to eliminate the air of the chamber, two different procedures depending on the model:

- A) procedure of gravity displacement, where the air is moved when the saturated steam is applied.
- B) procedure of vacuum, where the air is eliminated with a vacuum pump and then the chamber is filled with saturated steam until reaching the working temperature.

# STERILIZATION AUTOCLAVE "MINICLAVE"

For adjustable temperatures from 100 °C to 135 °C.

Relative pressure: 0 - 2,2 bar.

Digital regulation and reading of temperature by microprocesador.

## CHARACTERISTICS

External case and top made in stainless steel AISI 304.

Tank and lid in special aluminum alloy with the inside chamber teflon covered.

Quick and safe close lid, bayonet type.

Electric heating by protected element in the chamber.

Temperature probe Pt100 Din class A.

Safety valve.

Automatic air purge, controlled by the microprocesador.

Manual valve for drainage and unsteaming.

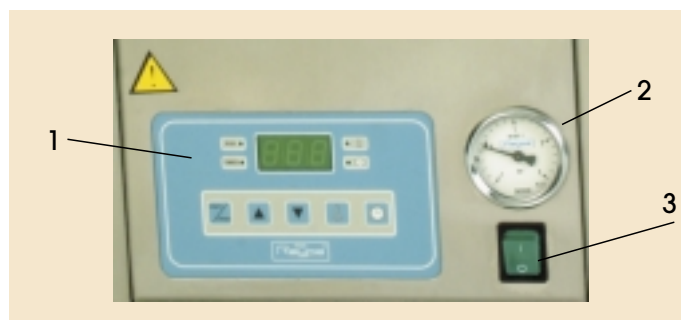
Fully supplied with protecting perforated grid and wire basket in stainless steel.



CODE	REF.	CAPACITY LITERS	INTERIOR MEASURES Ø X HEIGHT mm.	EXT. MEASURES mm. Height x Width x Depth	POWER W	WHEIGHT Kg
13060008	AE-8	7	245 x 150	480 x 325 x 350	1.000	11

## CONTROL PANEL

- 1.- Microprocessor control of temperature and sterilization time.
- 2.- Pressure gauge reader of the internal pressure of the sterilization chamber.
- 3.- Main switch.



# STERILIZATION AUTOCLAVE “STERICLAV-S” “NEW DESIGN” EQUIPPED WITH MICROPROCESSOR

Adjustable temperature from 105 °C to 139 °C.

Maximum pressure: 2,5 bar.



## SECURITY

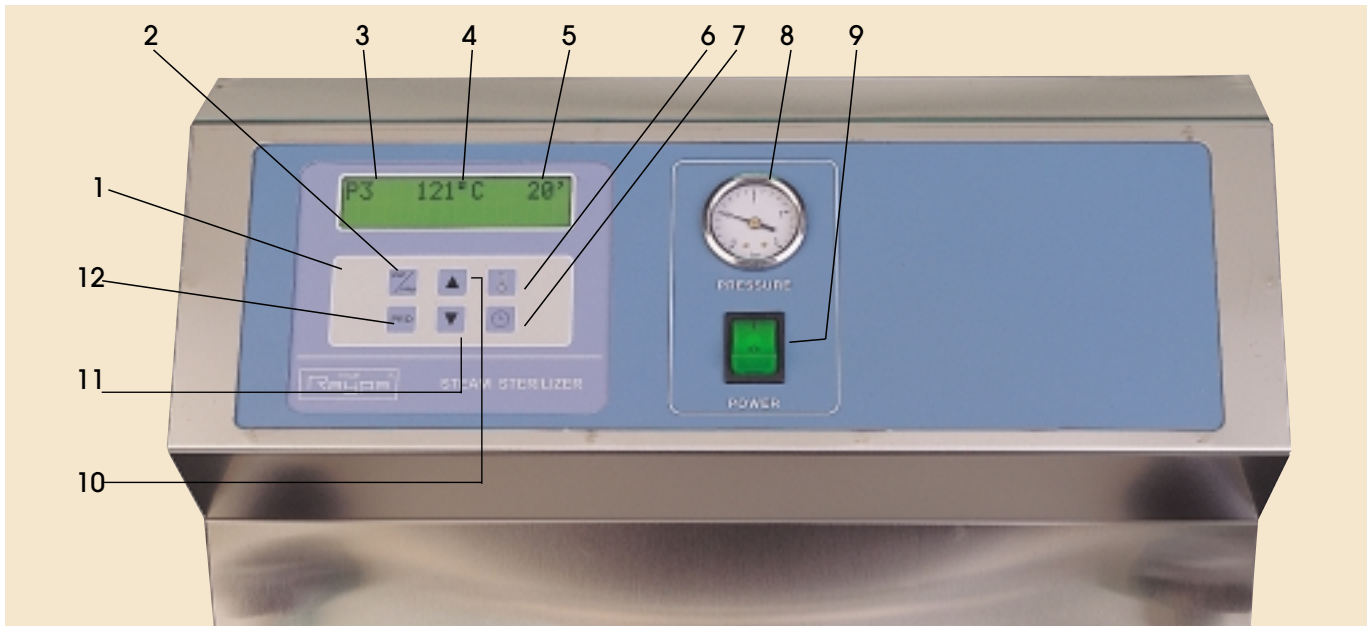
- Independent device to lock the lid of the autoclave while there is pressure inside the sterilization chamber.
- Safety thermostat of overtemperature.
- Safety valve. It discharges the pressure when it exceeds the maximum level.

## CHARACTERISTICS

- Steam sterilization autoclave, with a simple chamber.
- Capacity for 10 sterilization programmes.
- Automatic functioning.
- External case and top made of stainless steel AISI 304.
- Tank, lid and closure made of stainless steel AISI 316.
- Electric heating by protected elements inside the chamber.
- Automatic air purge, microprocessor controlled.
- Manual valves for draining and unsteaming. Fully supplied with protecting perforated grid to protect the heating element, and without baskets.
- Curled up orifice BSP 1/2" with cap, to allow the probe's introduction for the autoclave's validation or calibration (rear side accessible).
- Temperature sensor PT 100 Class A
- Temperature's control by microprocessor with P.I.D. action.
- Silicone gasket in the lid.



## CONTROL PANEL



- 1.- Microprocessor with LCD screen with 2 lines of 16 characters of 8 mm, which allows to see all the information required to control the autoclave. Electrical front protection IP-54
- 2.- "START/STOP" switch.
- 3.- Number of programme. (10 programmes from P0 to P9).
- 4.- Sterilization temperature. Adjustable from 105°C to 139°C.
- 5.- Sterilization time. Adjustable between 3 and 120 minutes.
- 6.- "THERMOMETER" key. To select the sterilization temperature.
- 7.- "CLOCK" switch. To select the sterilization time.
- 8.- Manometer.
- 9.- Main switch for start up (POWER).
- 10.- Increase switch.
- 11.- Decrease switch.
- 12.- Programming access switch.

## MICROPROCESSOR FUNCTIONS

The LCD screen indicates in all moments the process parameters.

It indicates the n° of programme, temperature and time and, in second row, it gives us the information of the phase where the sterilization cycle is at that moment.

Thus, during the cycle you can see:

- PURGE-HEATING: air and heating purge
- HEATING: heating and pressure increasing
- STERILIZING: sterilization period when the programmed temperature is reached, and while the sterilization time lasts.
- COOLING: cooling phase (with natural loss of heat), which takes from the end of the sterilization time until the END OF THE PROCESS.
- PROCESS COMPLETED: It informs of the end of the sterilization cycle, which does not arrive until the autoclave's chamber is at 95°C. At that moment, the lid can be opened.

## PROTECTED PROGRAMMES

The autoclave has 4 protected programmes. They are the most common sterilization programmes:

PROGRAMME N°	TEMPERATURE	TIME
P0	115 °C	60'
P1	121 °C	30'
P2	133 °C	20'
P3	121 °C	20'

The programmes between P4 and P9 are free for the user to programme them according to its necessities.

## STERILIZATION GUARANTEE

The microprocessor checks the correct phasing of the sterilization cycle. If there is any failure in the phasing, it will appear in screen. Thus, you can see in the LCD screen the following failures:

- FAULT PROBE: temperature probe broken or damaged.
- FAULT HEATING: problems in the heating phase until the programmed temperature.
- FAULT TEMPERATURE: problems in the autoclave to maintain the temperature during the sterilization phase.
- ELECTROCUTTING: while the sterilization cycle was on, the autoclave has lost the electrical feeding.  
(This is not a failure properly, but the sterilization cycle is aborted).

CODE	REF.	CAPACITY LITERS	INTERIOR MEASURES Ø x HEIGHT mm.	EXT. MEASURES mm. Height x Width x Depth	POWER W	WHEIGHT Kg
13070112	AES-12	13	250 x 270	520 x 490 x 500	1.000	35
13270028	AES-28	28	300 x 400	1.010 x 510 x 560	2.000	60
13290075	AES-75	75	400 x 600	1.090 x 620 x 730	3.000	85
13310011	AES-110	110	400 x 850	1.330 x 630 x 730	4.500	114
13330015	AES-150	150	500 x 750	1.310 x 760 x 850	6.000	140

AES-110 AND AES-150 MODELS, ARE ONLY SUPPLIED FOR TRIFASIC ELECTRIC CURRENT 220V OR 380 V + NEUTRAL.

## ACCESSORIES AND SPARE PARTS

### PERFORATED STAINLESS STEEL BASKETS

CODE	REF.	FOR AUTOCLAVE	USEFUL MEASURES Ø x HEIGHT mm	N° OF BASKETS PER AUTOCLAVE	WEIGHT KG
90130112	CI-12	AES-12	225 x 215	1	1
90130228	CI-28	AES-28	280 x 200	2	1,5
90130375	CI-75	AES-75	380 x 260	2	2,5
	CI-75	AES-110	380 x 260	3	
90130450	CI-150	AES-150	475 x 360	2	4



## NON-PERFORATED STAINLESS STEEL BASKETS

Specially recommended when using the autoclave to sterilize liquids, culture medium or bags with polluted capsules. It avoids that, if the container breaks, the liquid will go to the tank of the autoclave and will obstruct the pipes.

CODE	REF.	FOR AUTOCLAVE	USEFUL MEASURES Ø x HEIGHT mm	N° OF BASKETS PER AUTOCLAVE	WEIGHT KG
90130512	CCI-12	AES-12	225 x 215	1	1
90130628	CCI-28	AES-28	280 x 200	2	1,5
90130775	CCI-75	AES-75	380 x 260	2	2,5
	CCI-75	AES-110	380 x 260	3	
90130850	CCI-150	AES-150	475 x 360	2	4



## STAINLESS STEEL CYLINDERS TO STERILIZE PETRI CAPSULES AND PIPETTES.

CODE	REF.	DESCRIPTION	WEIGHT KG
90130740	CEP-7040	CYL. TO STERILIZE PIPETTES Ø 70 x 400 MM.	1
90131340	CEP-1340	CYL. TO STERILIZE PIPETTES Ø 130 x 400 MM.	1
90131326	CEP-1326	CYL. TO STERILIZE PETRI CAP Ø 130 x 260 MM.	1
90131347	CEP-1347	CYL. TO STERILIZE PETRI CAP Ø 130 x 400 MM.	1



Printer of continuous sheet, it prints the programme number, the cycle number. Temperature, date, time and hour of every sterilization. Any warning notice of failure is also reflected. If at the end of the sterilization cycle everything is correct, it prints: "Sterilization O.K." This accessory must be installed in the factory  
**Ref. IT Code 90131300**

It uses thermic paper roll of ø 50 mm x 57 mm. wide.

## HEIGHT ADJUSTABLE SUPPORT WITH SHELVES

Stainless steel supports provided with three shelves. In stainless steel, adjustables in height every 12 mm. It allows to put inside the autoclave glass, objects,... of different measures to make good use of the internal space.

CODE	REF.	FOR AUTOCLAVES
90131428	SRA-1	AES-28
90131475	SRA-2	AES-75
90131510	SRA-3	AES-110
90131550	SRA-4	AES-150



- Fully supplied, with three shelves.

# MICROPROCESSOR CONTROLLED VERTICAL AUTOCLAVES, "STERILMATIC-C-DRY"

Adjustable temperatures from 105°C to 139°C.  
Maximum pressure: 2,5 bar.



## SECURITY

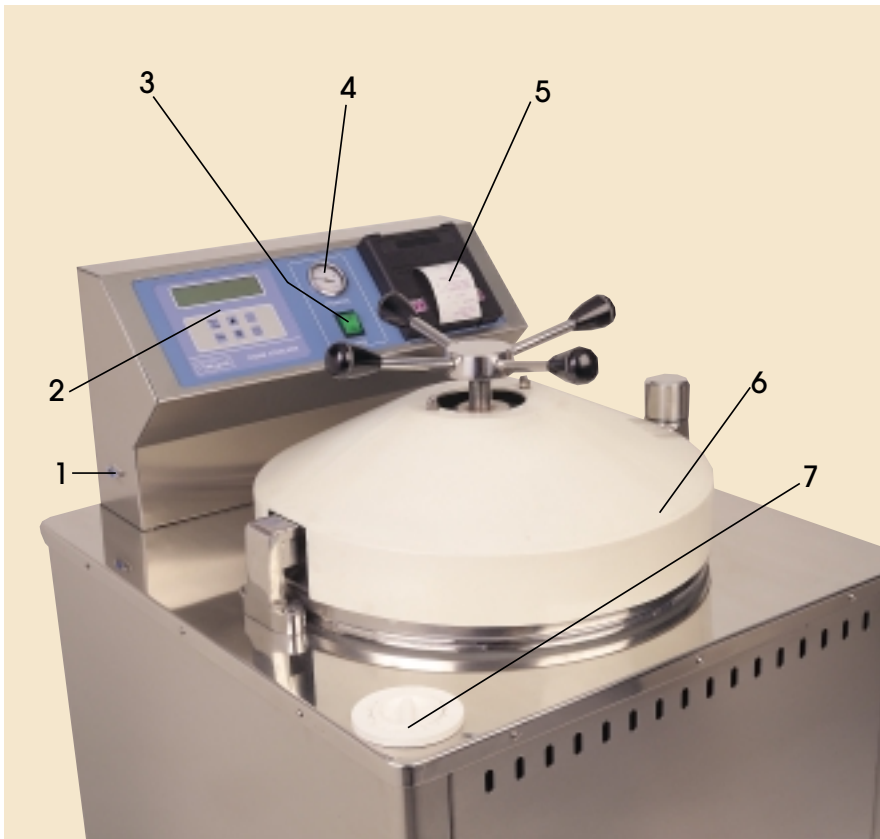
- Independent device that blocks the lid of the autoclave while there is pressure in the sterilization chamber.
- Safety thermostat of over-temperature.
- Safety presostat of over-pressure. It disconnects the heating in case of exceeding pressure.
- Safety valve. It discharges the pressure in case of exceeding the maximum level.

## CHARACTERISTICS

- Steam sterilization autoclave with simple chamber.
- External case and top made of stainless steel AISI 304.
- Tank, lid and closure made of stainless steel AISI-316.
- Tank water for the autoclave feeding, with maximum and minimum level detector.
- Automatic water filling in the sterilization chamber.
- Air purge and final drying with vacuum system
- Curled up orifice BSP 1/2" with cap, to allow the probe's introduction for the autoclave's validation or calibration (rear side accessible).
- RS-232 exit to connect a printer or PC.
- Silicone gasket in the lid.
- Temperature sensor PT 100 Class A
- Temperature's control by microprocessor with P.I.D. action.
- Electric heating by protected elements inside the chamber.
- Supplied with perforated tray to protect the heating element, and without baskets.



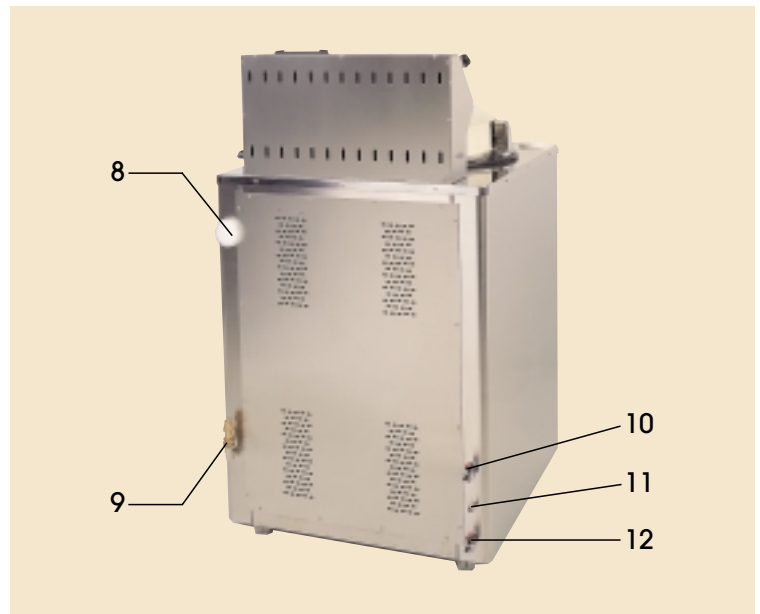
## TECHNICAL DESCRIPTION



- 1 Interface outsource RS-232.
- 2 Microprocessor.
- 3 Mains switch.
- 4 Mano-vacuometre.
- 5 Printer of continuos sheet (accessory installed in the factory).
- 6 Termic protector of the lid.
- 7 Condensed tank filled.

## REAR VIEW

- 8 Ventilation bacteriological filter.
- 9 Safety valve.
- 10 Condensed tank empty valve.
- 11 Condensed tank overflow.
- 12 A utoclave chamber empty valve.

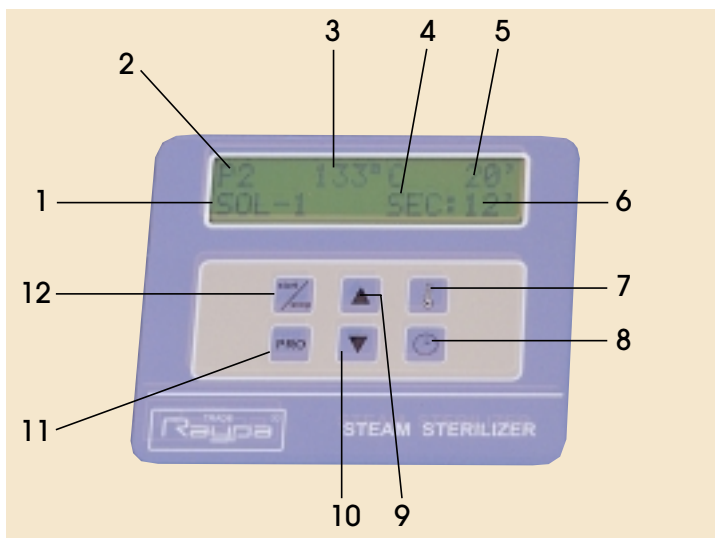


## MICROPROCESSOR FUNCTIONS AND CHARACTERISTICS

The autoclaves STERILMATIC- C are equipped with a microprocessor, the result of our investigation and long experience as a manufacturer of autoclaves, to fulfil the necessities and demands of our customers. The microprocessor, provided with an alpha-numeric screen of liquid-glass, shows which part of the process is doing at any time, and which failure may happen, printing the results of the sterilization, as well as the date and the hour to ensure the product sterile.

It can also admit a second temperature probe to detect in the "heart" of the liquids, or in dispensable bags the real temperature, sterilizing them correctly and efficiently. In sum, it has been designed to make easy the sterilization process.

## TECHNICAL DESCRIPTION



- 1 Operation Mode: SOLIDS/LIQUIDS.
- 2 Program Number.
- 3 Sterilization Temperature.
- 4 Final Drying.
- 5 Sterilization Time.
- 6 Drying Time.
- 7 Sterilization Temperature Select.
- 8 Sterilizing and Drying Time Select.
- 9 Increase Key.
- 10 Decrease Key.
- 11 Programming Set.
- 12 Start/Stop of selected cycle.

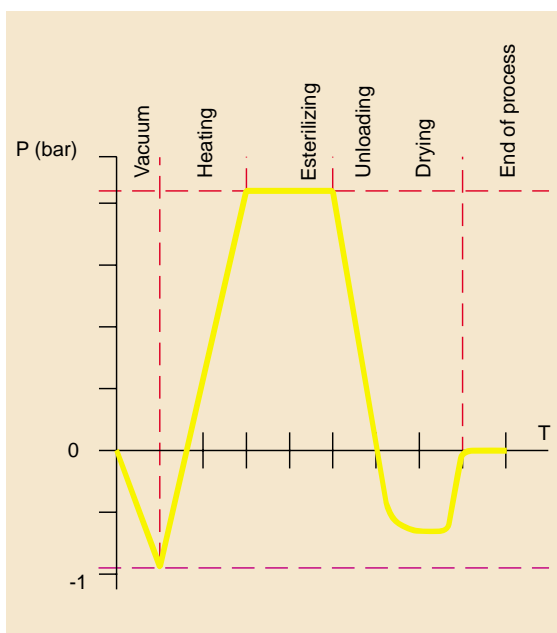
### Parameters that can be programmed:

Sterilization temperature  
 Sterilization time  
 Drying or not-Drying  
 Drying time  
 Sterilization mode: SOLIDS/LIQUIDS  
 Parameters printing

### Programming variables:

Number of programmes:	10
Sterilization temperature:	from 105°C to 139°C
Sterilization time:	from 3 to 120 minutes
Solids/Liquids	
Drying/Not-Drying	
Drying time:	from 1 to 60 minutes

When we execute a sterilization program with the microprocessor, its screen is showing us at the very moment in which cycle of the process is, apart from giving us the information about the temperature and time of sterilization and drying. A complete program of sterilization is composed by the following phases:



- VACUUM: Initial vacuum (air ejection of the chamber).
- FILLING: Automatic water distilled filled of the sterilization chamber.
- HEATING: Heating and pressure increase.
- STERILIZING: Sterilization.
- UNLOADING: Automatic unload of the water and steam of the sterilization chamber, to the water distilled tank.
- DRYING: Vacuum and barometric leveling.
- END OF PROCESS: End of sterilization cycle notice.

In the LIQUID programmes, the UNLOADING phase is not executed and, instead of it, there is the COOLING phase (cooling by natural loss of heat until the End of the Process temperature). Also in the LIQUID programmes, the DRYING phase does not exist because it is not possible to program a final drying.

The microprocessor display will display a warning messages when, for example, the condensers tank does not have enough water, when the bacteriological filter must be changed, or when the results are being printed.

In this way, if any anomaly appears during the execution of the program, the program is aborted and a failure message will appear, for example for the breaking of the temperature sensor, if there is failure during the filling of the the autoclave's chamber period, if there is failure in the heating period, if the sterilization temperature defers 2 degrees above or below from the selected temperature, if there has been any electrical cutting,...

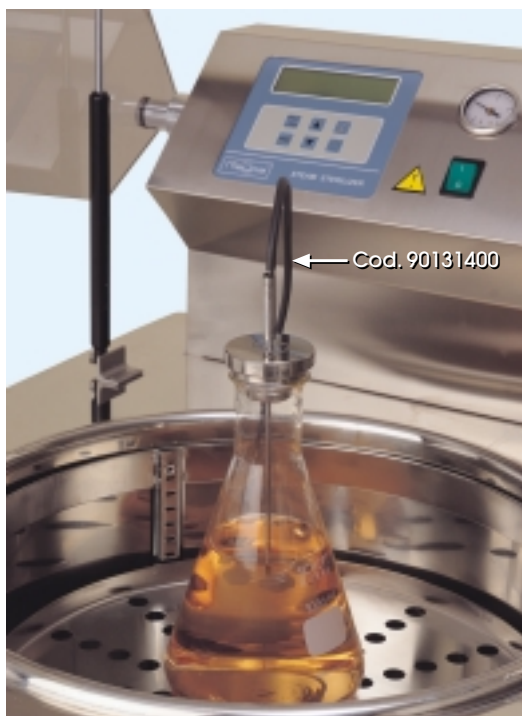
All these messages in display help favourably to understand if there is any anomaly.

CODE	REF.	CAPACITY LITERS	INTERIOR MEASURES Ø x HEIGHT mm.	EXT. MEASURES mm. Height x Width x Depth	POWER W	WHEIGHT Kg
13360028	AE-28-DRY	28	300 x 400	1.010 x 510 x 560	2.000	60
13380075	AE-75-DRY	75	400 x 600	1.090 x 620 x 730	3.000	85
13400011	AE-110-DRY	110	400 x 850	1.330 x 630 x 730	4.500	114
13420015	AE-150-DRY	150	500 x 750	1.310 x 760 x 850	6.000	140

Fully supplied with perforated tray heating element protector and without baskets.

AE-110-dry and AE-150-dry models, are only supplied for three-phase electric current 220v 0 380 v + neutral

## FLEXIBLE HEART PROBE PT-100



Recommended for the sterilization of culture mediums in flasks of 1 litre or more, because this device starts up the sterilization time when the medium reaches the adequate temperature.

At the same time it can be placed in the middle of the residuum bags to ensure the sterilization at the proper temperature in the inside of the bag.

The temperature control through the second probe (installed as an accessory) is armed or disarmed by means of the microprocessor screen.

This accessory must be installed in the factory.

Ref. PT-2 Code 90131400

## TABLE TOP PRINTER OF CONTINUOUS SHEET

It prints the programme number, cycle number, temperature, time date and hour of every sterilization.

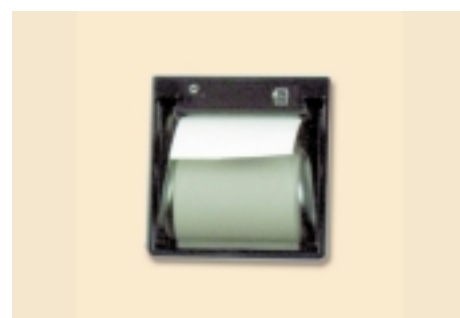
Every warning or failure message is also reflected .

If at the end of the sterilization cycle everything is correct, it prints "STERILIZATION O.K."

This accessory must be installed in the factory (Panel Printer).

Ref. IT Code 90131300

It uses thermic paper roll of ø 50 mm x 57 mm. wide.



## TABLE TOP PRINTER OF CONTINUOUS SHEET

It prints the programme number, cycle number, temperature, time, date and hour of every sterilization. Every warning or failure message is also reflected.

If at the end of the sterilization cycle everything is correct, it prints "STERILIZATION O.K."

Electrical feeding 230V. Connection serial RS-232.

Ref. ITS Code 90131301

It uses standard paper roll of ø 50 x 57 mm wide.



## PERFORATED STAINLESS STEEL BASKETS



CODE	REF.	FOR AUTOCLAVE	USEFUL MEASURES Ø x HEIGHT mm	N° OF BASKETS PER AUTOCLAVE	WEIGHT KG
90130228	CI-28	AES-28	280 x 200	2	1,5
90130375	CI-75	AES-75	380 x 260	2	2,5
	CI-75	AES-110	380 x 260	3	
90130450	CI-150	AES-150	475 x 360	2	4

## NON-PERFORATED STAINLESS STEEL BASKETS

Specially recommended when using the autoclave to sterilize liquids, culture medium or bags with polluted capsules. It avoids that, if the container breaks, the liquid will go to the tank of the autoclave and will obstruct the pipes.

CODE	REF.	FOR AUTOCLAVE	USEFUL MEASURES Ø x HEIGHT mm	N° OF BASKETS PER AUTOCLAVE	WEIGHT KG
90130628	CCI-28	AES-28	280 x 200	2	1,5
90130775	CCI-75	AES-75	380 x 260	2	2,5
	CCI-75	AES-110	380 x 260	3	
90130850	CCI-150	AES-150	475 x 360	2	4



## STAINLESS STEEL CYLINDERS TO STERILIZE PETRI CAPSULES AND PIPETTES.



CODE	REF.	DESCRIPTION	WEIGHT KG
90130740	CEP-7040	CYL. TO STERILIZE PIPETTES Ø 70 x 400 MM.	1
90131340	CEP-1340	CYL. TO STERILIZE PIPETTES Ø 130 x 400 MM.	1
90131326	CEP-1326	CYL. TO STERILIZE PETRI CAP Ø 130 x 260 MM.	1
90131347	CEP-1347	CYL. TO STERILIZE PETRI CAP Ø 130 x 400 MM.	1

## HEIGHT ADJUSTABLE SUPPORT WITH SHELVES

Stainless steel supports provided with three shelves.

In stainless steel, adjustables in height every 12 mm.

It allows to put inside the autoclave glass, objects,... of different measures to make good use of the internal space.

Fully supplied, with three shelves.

CODE	REF.	FOR AUTOCLAVES
90131428	SRA-1	AE-28
90131475	SRA-2	AE-75
90131510	SRA-3	AE-110
90131550	SRA-4	AE-150



# STERILIZATION AUTOCLAVES WITH MICROPROCESSOR "CLINOCLAV"

## STEAM STERILISATION AUTOCLAVES

**Class N according to EN-13060**

Adjustable temperatures up to 135 °C. (2,5 bar).



Class N autoclaves are indicated to sterilize unwrapped solid material to be used just after being sterilized, or where there is no priority to keep it sterilized

### CHARACTERISTICS

- Epoxy resin oven painted external case.
- Front part made in stainless steel AISI 304.
- Sterilization chamber and lid made in stainless steel AISI 316.
- Electrical heating with immersion heater inside the chamber.
- Automatic air purge.
- Time and temperature regulation microprocessor with digital screen.
- Controller resolution 1 °C.
- Temperature probe Pt 100 DIN class A.
- Manual filling of the sterilization water.
- Condensed tank.



## SAFETY

### - SAFETY VALVE

unloads the internal pressure in case of overpressure.

### - SAFETY THERMOSTAT

disconnects and blocks the heater of the autoclave in case of overtemperature or lack of water in the sterilization chamber.

### - OPEN LID SENSOR

blocks the start of the sterilization cycle if the lid is open or not properly closed.

## CONTROL PANEL

1.- Temperature and sterilization time controlled by microprocessor.

2.- Open door alarm pilot-light.

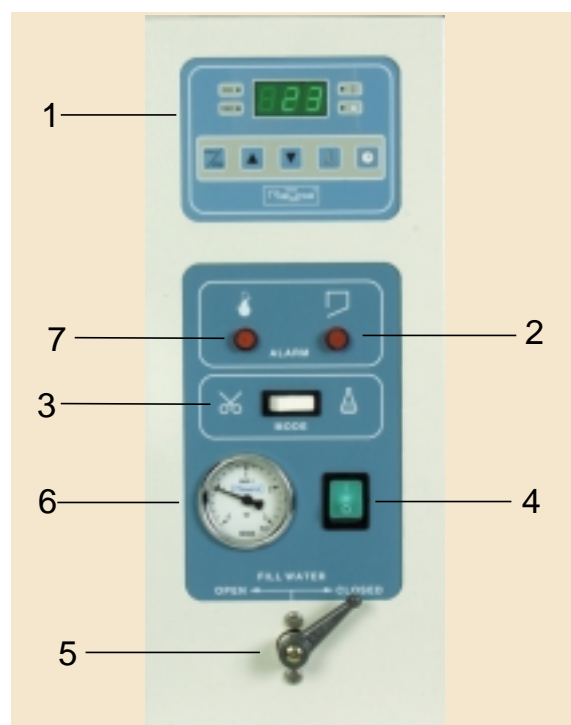
3.- SOLID/LIQUIDS sterilization selector.

4.- Main switch.

5.- Manual filling valve of the sterilization water.

6.- Pressure gauge.

7.- Overtemperature alarm pilot-light.



CODE	REF.	CAPACITY LITERS	INTERIOR MEASURES Ø x HEIGHT mm.	EXT. MEASURES mm. Height x Width x Depth	POWER W	WHEIGHT Kg
13220011	AH-11N	11	200 x 360	370 x 510 x 550	900	40
13230021	AH-21N	21	250 x 415	425 x 590 x 680	2.000	55

## FULLY SUPPLIED WITH THE FOLLOWING ACCESSORIES

1 Trays support.

2 Perforated trays in stainless steel (Autoclave AH-11 N).

3 Perforated trays in stainless steel (Autoclave AH-11 N).

1 trays holding clamps.

1 Flexible hose with connector for emptying the condensating tank.



# STERILIZATION AUTOCLAVES WITH MICRPROCESSOR “CLINOCLAV”

## STEAM STERILISATION AUTOCLAVES

Class S according to norm EN-13060



Autoclaves of class S, they are autoclaves indicated to sterilize solid material without Pocketing, solid pocketed material, small porous elements, and hollow elements of type B (slightly deep and broad cavities).

### CONSTRUCTION

- Sterilisation chamber made of stainless steel AISI 316 polished and bright
- Exterior case in stainless steel, lid and control panel support oven painted

### SAFETY SYSTEMS

- Safety device that blocks the program if the door is not correctly closed. The same device aborts the sterilisation cycle and removes the autoclave's pressure automatically, when trying to open the door while the sterilisation cycle is on.
- SAFETY VALVE, removes the inner pressure in case of going over the levels
- SAFETY THERMOSTAT, disconnects the autoclave's heating in case of overtemperature.

### WORKING CYCLES

- The autoclave “CLINOCLAV-M” is equipped with 5 sterilisation programmes for a fast and perfect treatment of the different materials, making the user's work easy.

# CONTROL PANEL

## 1.- LCD SCREEN

It informs about the sterilisation process and about the different sequences or malfunctions of the named process.

## 2.- QUICK STERILISATION

Temperature: 134°C.

Time: 3 min.

WITHOUT DRYING INDICATED FOR:

Turbines, counter-angles, hand-pieces, glass and non-packed instruments

## 3.- STERILISATION IN GENERAL

Temperature: 134°C.

Time: 15 min.

Drying: 12 min.

INDICATED FOR:

Porous materials (gauzes, fabrics...)

Bagged instrumental, instrumental in general

## 4.- DELICATE INSTRUMENTAL

Temperature: 121°C.

Time: 30 min.

Drying: 12 min.

INDICATED FOR:

Manufactured materials in plastic, wired and conductions, ultrasonic hand-pieces, electroscalpels,...

## 5.- OPTIONAL FLASH

Program adjustable to the demands of the user for the sterilisation. It allows the introduction of temperature and time at your own choice, so the CLINOCLAV-M will adapt to the requirements that in the future will be compulsory by law.

## 6.- DISINFECTION

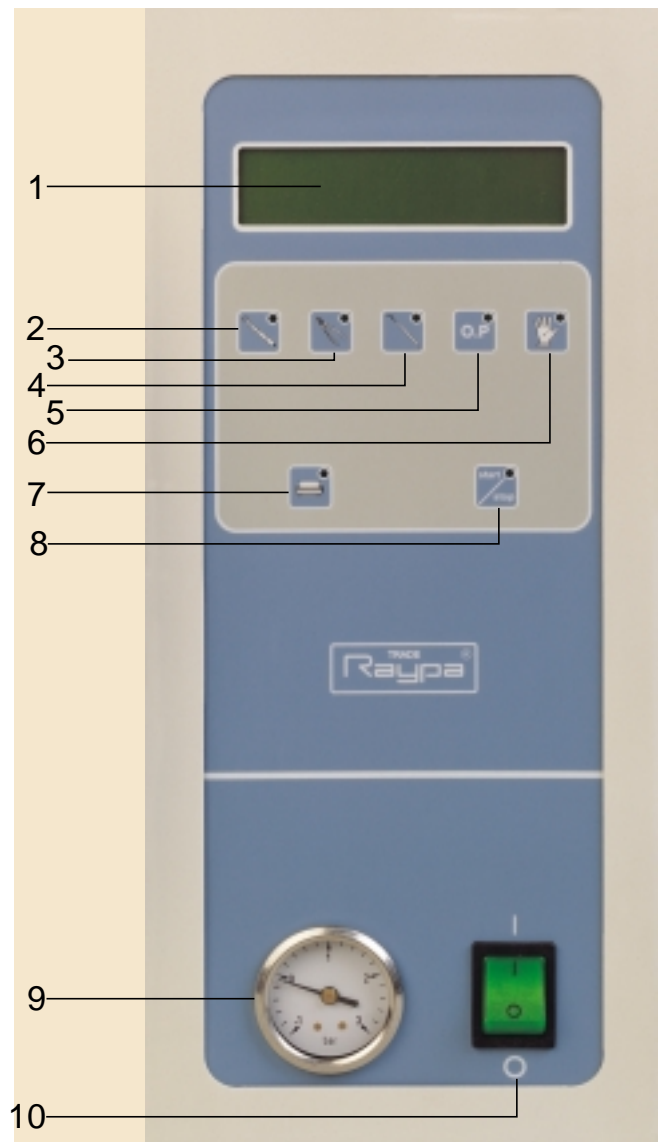
Temperature: 105°C.

Time: 30 min.

Drying: 12 min.

INDICATED FOR:

Packed or unpacked material (optic fiber, polymeration lamp-heads,...)



## 7.- PRINTER KEY ON/OFF

Key to print the data of the last cycle.

## 8.- START/STOP KEY

Key to start or to stop the sterilisation program programmed.

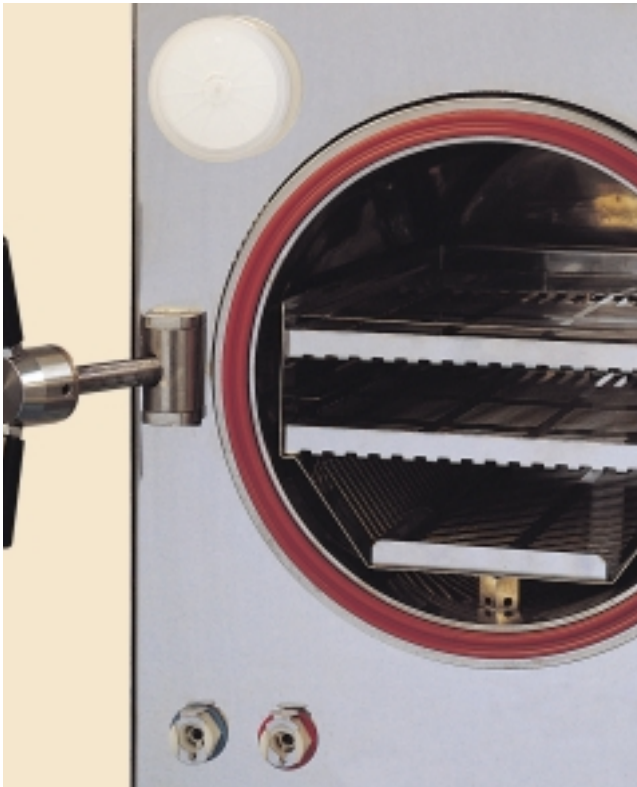
## 9.- PRESSURE AND VACUUM GAUGE

It indicates the vacuum or pressure of the sterilisation chamber.

## 10.- MAIN SWITCH

Connects or disconnects all the circuits of the autoclave.

## PREVACUUM SYSTEM



DETAIL OF THE BACTERIOLOGICAL FILTER AND DEVICES FOR THE TO DRAIN OF THE DIRTY AND CLEAN WATER TANKS

The autoclave CLINOCLAV-M is equipped with a device that makes the vacuum in the chamber before the start of the sterilisation process. That makes it possible to achieve a steam saturation inside the chamber for the correct sterilisation. At the same time, once the cycle has finished, there is a vacuum inside the chamber that optimises the drying process.

Due to the vacuum system, the autoclave CLINOCLAV-M is equipped with a bacteriological filter for the air entrance (porosity 0,2 micras).

### PARTICULAR FUNCTIONS

The autoclave CLINOCLAV-M has got level sensors of automatic functioning level, which dosify the necessary water for the sterilisation, or warn if the condensated tank must be refilled, or empties the dirty water tank. The autoclave CLINOCLAV-M always uses clean water for the sterilisation

Auto-diagnostical system, which supervises that the sterilisation is done in all its phases. If it doesn't, the anomaly is shown in the display and it aborts the sterilisation cycle.

Rear connection for the printer RS-232.

### MODELS

CODE	REF.	CAPACITY LITERS	INTERIOR MEASURES Ø x HEIGHT mm.	EXT. MEASURES mm. Height x Width x Depth	POWER W	WHEIGHT Kg
13240011	AH-11S	11	200 x 360	370 x 510 x 550	900	40
13250021	AH-21S	21	250 x 415	425 x 590 x 680	2.000	55

### STANDARD ACCESSORIES

The autoclave CLINOCLAV-M is supplied with the following accessories:

- 1 Tray support
- 2 St. St. Perfrated trays (autoclave AH-11)
- 3 St. St. Perfrated trays (autoclave AH-21)
- 1 Bags support
- 1 Pincers to extract trays
- 1 Flexible tube with connector to empty the tanks

# STERILIZATION AUTOCLAVES WITH MICRPROCESSOR "CLINOCLAV" B PLUS

## STEAM STERILISATION AUTOCLAVES

### Class B according to EN-13060

Fractionated vacuum

Steam generator incorporated



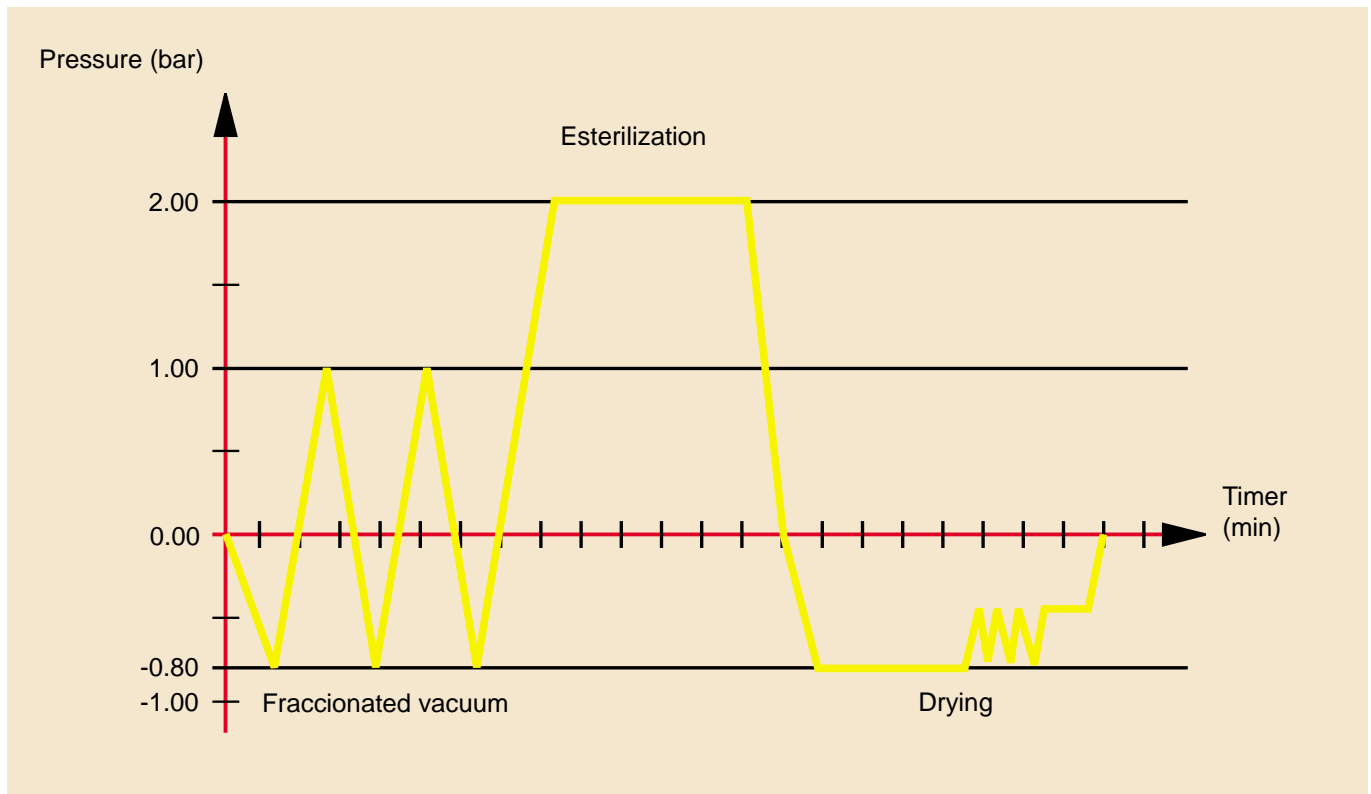
Class B autoclaves are indicated to sterilize solid materials, hollow and porous wrapped or unwrapped.

CLINOCLAV B PLUS, autoclave is equipped with a powerful vacuum pump and different programmes to effectuate alternatively several vacuums and raises of pressure in a successive way in the sterilization chamber, before the proper sterilization phase.

Thus, the air in the wrapped material and in the porous and hollow elements is completely removed, and thus the saturated steam can penetrate to the heart the items.



## STERILIZATION CYCLE DIAGRAM



## CHARACTERISTICS

### CONTROL BY MICROPROCESSOR

All the parameters, temperature, pressure and time are effectively evaluated by an electronic control system with microprocessor.

Any anomaly in the system aborts automatically the sterilization cycle.

A wide LCD display shows all the time all the necessary parameters and messages easily and clearly.



### - PRE-HEATING "STAND BY"

An automatic system keeps the sterilization chamber pre-heated before the sterilization cycle. Thus the cycle is accelerated and condensations avoided.

### - STEAM GENERATOR INCORPORATED

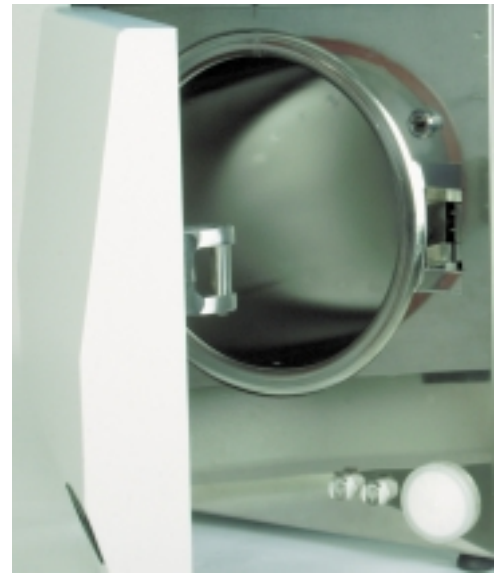
With this system the established parameters of pressure and temperature are reached fast and efficiently.

## AUTOMATED DOOR LOCKING

An automated system locks automatically the door of the autoclave at the beginning of the sterilization cycle, and it keeps it locked until the cycle is finished and the pressure is 0.

## DOOR LOCKING

A triple dynamic electromechanical safety system assures the locking of the door until internal pressure is 0.



## - FRACTIONATED VACUUM

- A fractionated vacuum system in the phase before the sterilization, like in the drying, assure a perfect penetration of the steam and an efficient drying.

## - INTEGRATED VESSELS OF LOAD AND UNLOAD

- Two integrated vessels in the autoclave, one for the pure water and the other one for the used waret, guarantee a clean sterilization.
- It is possible to effectuate the load of the vessel of pure water automatically from an external vessel, as well as unload of the used water also to an external vessel or draining.

## - AUTOMATIC TEST CYCLES

- "CLINOCLAV B PLUS" a part from the sterilization cycles, is also equipped with three test cycles to control the autoclave.
- Test to control de vacuum VACUUM TEST, assures a perfect airtightness of the sterilization chamber and the hydraulic circuit.
- Test to control the capacity of the autoclave to steriliza pourous and/or wrapped objets BOWI & DICK TEST.
- Test to control the capacity of the autoclave to sterilize hollow objets type A HELIX TEST.

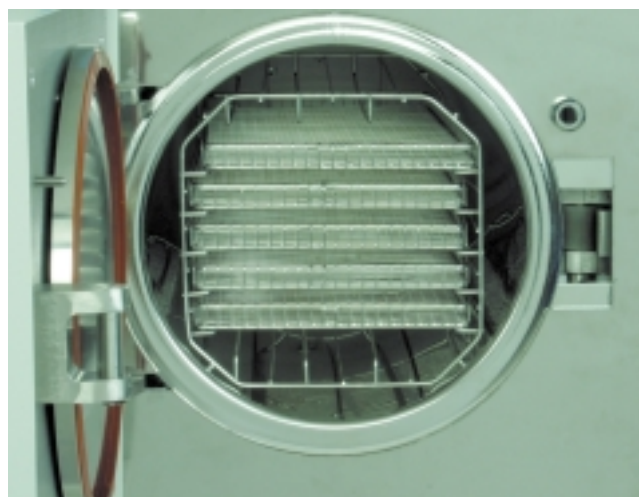


## STAINLESS STEEL CHAMBER

Sterilization chamber made of stainless steel AISI 316 and polished electrically.

Its wide capacity of 21 litres.

Allons an special support with five trays, and it facilitates and improves the sterilization.



## INTEGRATED PRINTER

"CLINOCLAV B PLUS" has an integrated printer from factory. It allows registering completely the sterilization cycle.

At the same time, the printers is basic to validate the vacuum test.



## TECHNICAL CHARACTERISTICS

Apparatus: Sterilization autoclave type B according to EN 13060

Total volume: 21 litres

Sterilization chamber measures: Ø 250 mm x 430 mm depth

External measures: 630mm height x 430 mm width x 600mm depth

Feeding power: 220v ± 10%

Net frequency: 50/60 Hz.

Nominal power: 2200w

Sterilization programs: 11 fix programmes (porous, prion, Stiff hollows, solids, Emergencies and disinfection), 3 Modifiable programs for the user

Total mass to sterilize: Pourous material 1.3Kg.

Non-Wrapped solid and/or hollow material 6.3 Kg

Wrapped solid and/or hollow material 3.8 Kg

## STANDARD EQUIPEMENT

It is provided with the following items:

1 holder for trays in stainless steel

5 trays for the instruments made of stainless steel wire.

1 extractor of trays

1 destillated water container for manual use

1 Silicone Tube two meters long to empty the water

1 Instruction for use

MODEL: AH-21 B PLUS

CODE: 13100021