

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

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



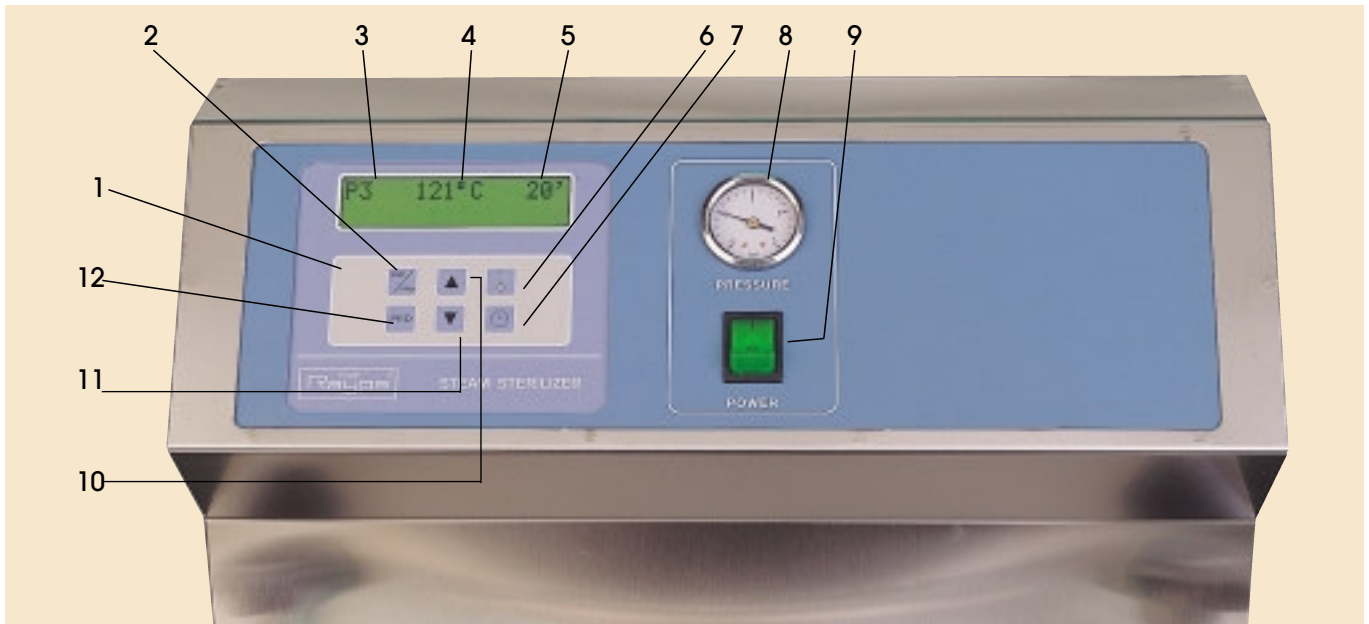
## SECURITY

- 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.



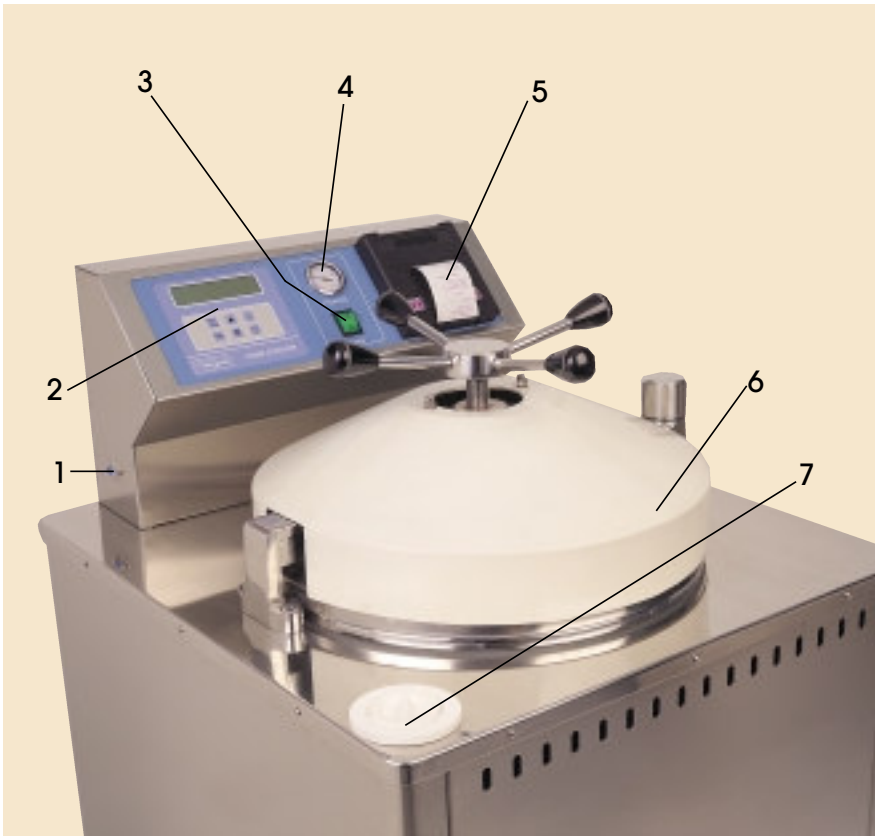
## SECURITY

- 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.

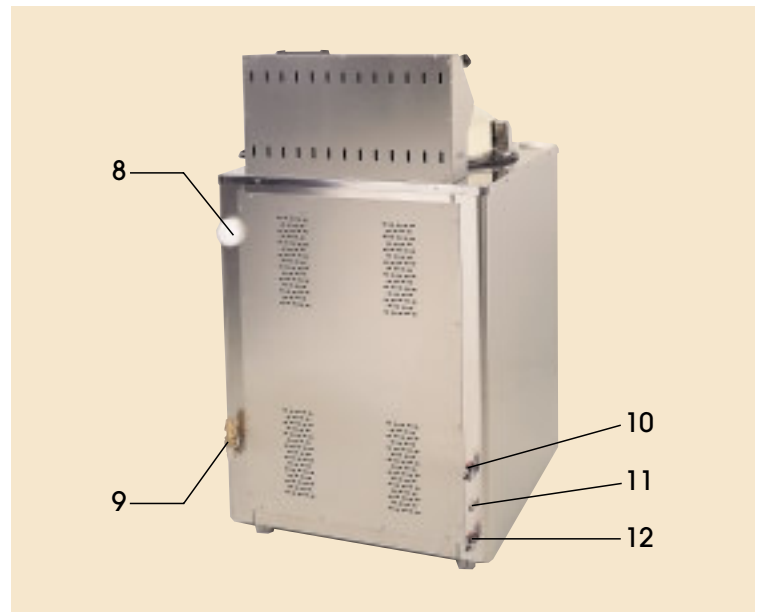
## TECHNICAL DESCRIPTION



- 1 Interface outsource RS-232.
- 2 Microprocessor.
- 3 Mains switch.
- 4 Mano-vacuometre.
- 5 Printer of continuous 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.

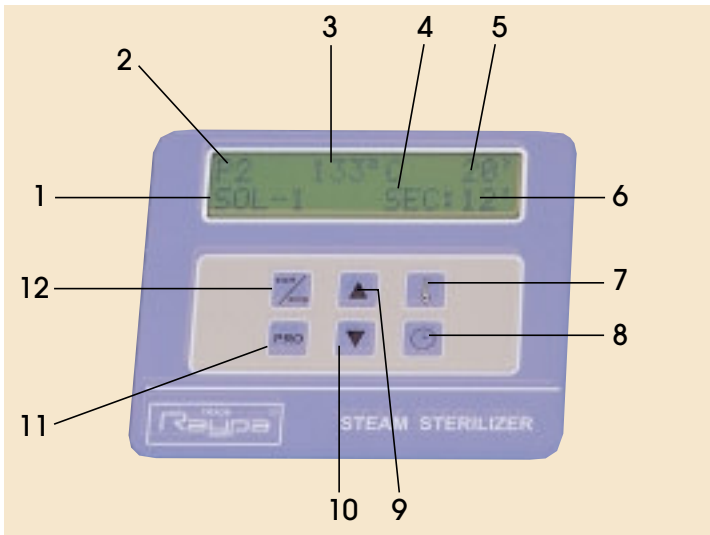


## MICROPROCESSOR FUNCTIONS AND CHARACTERISTICS

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.

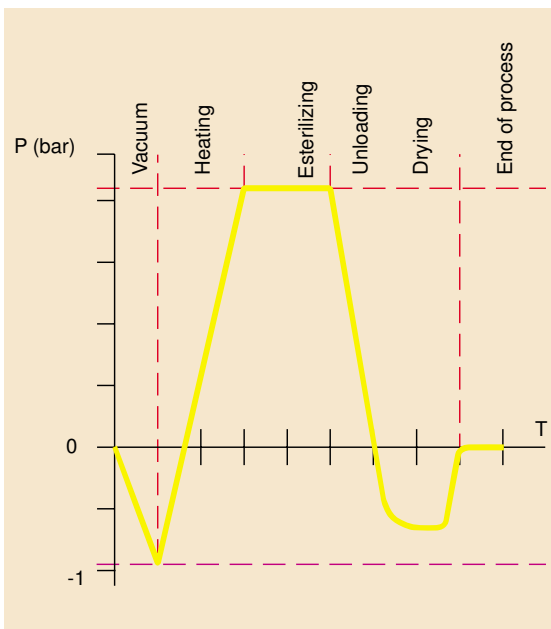
### Parameters that can be programmed:

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,...

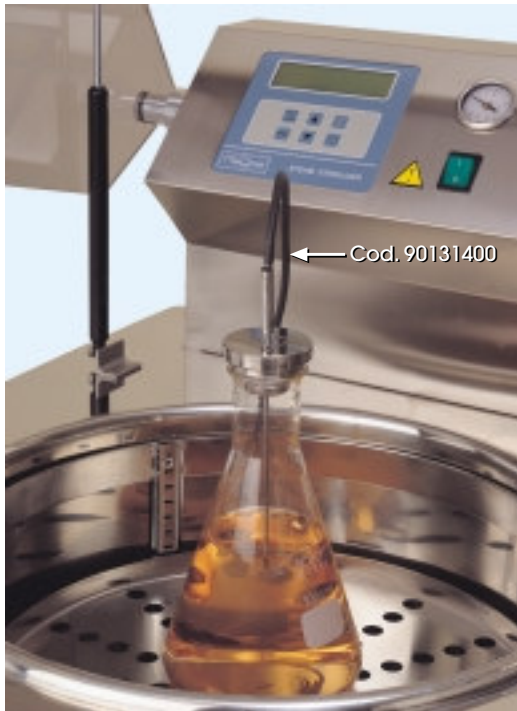
All these messages in display help favourably to understand if there is any anomaly.

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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



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	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.

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



CODE	REF.	DESCRIPTION	WEIGHT KG
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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, adjustable 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
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