

### ELECTRICAL AUTOCLAVES FOR STERILIZATION

Wide range of electrically heated bench top and top loading autoclaves. Pressure range from 0.62 to 2 bar, Capacity: 1.5, 8, 12, 18, 20, 23, 25, 50, 80 and 150 litres.

Complies with the pressure and autoclave directives



#### PRINCIPAL OF STEAM STERILIZATION:

STERILIZATION IS THE PROCESS OF THE DESTRUCTION AND ELIMINATION OF ALL FORMS OF MICROBIAL LIFE, INCLUDING BACTERIA AND ITS SUB-FORMS.

THE LABORATORY AUTOCLAVE CONSISTS OF A VESSEL IN WHICH STEAM FLOWS AT A HIGH PRESSURE WITH A STERILIZATION PURPOSE. SATURATED STEAM WILL IMMEDIATELY CONDENSE AND THUS RELEASING ITS HIGH EVAPORATION HEAT, WHICH IS IN FACT THE DESTRUCTIVE AGENT. IN ORDER THAT STERILIZATION WOULD BE EFFECTIVE, STEAM MUST BE SATURATED AND, CONSEQUENTLY, ALL THE AIR INSIDE THE VESSEL MUST BE PURGED BEFORE INITIALIZING THE PROCESS.

IN THE FOLLOWING PAGES J.P. SELECTA OFFERS AN EXTENSIVE RANGE OF AUTOCLAVES WITH A CHOICE OF ATMOSPHERIC PURGING OR VACUUM PURGING SYSTEMS. A CHOICE OF MICROPROCESSOR CONTROLLED SYSTEMS ARE OFFERED INCLUDING DRYING CYCLES AT THE END OF THE STERILIZATION CYCLE.



Vertical desktop autoclaves<br/>Pressure regulatorPages57 to 58Vertical stand autoclaves<br/>Microprocessor control and atmospheric purgePages59 to 62Vertical stand autoclaves<br/>Microprocessor controlPage63Horizontal autoclaves<br/>Microprocessor control and fractional vacuum purgePages64 to 66Water distiller for autoclavesPages62Polypropylene and polyester bag sealersPages67



### **Electrical Autoclaves for sterilization**



#### THREE DIFFERENT CONTROL SYSTEMS:



# CONTROL BY PRESSURE WITH ATMOSPHERIC PURGE: MICRO 8 MED 12 MED 20





# MICROPROCESSOR CONTROL OF TEMPERATURE AND STERILIZATION CYCLE, PULSED VACUUM AIR PURGE:

AUTESTER ST DRY PV-B 12 (mod. horizontal) AUTESTER ST DRY PV-B 18 (mod. horizontal) AUTESTER ST DRY PV-B 23 (mod. horizontal)



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**AUTESTER ST DRY PV-II 25 (mod. horizontal)** 



RS-232 interface output of parameters to a computer, printer or USB adapter.

The printer or the USB adapter can be built-in the autoclaves together with the control panel:

AUTESTER ST DRY PV-II 50 (mod. vertical) AUTESTER ST DRY PV-II 80 (mod. vertical) AUTESTER ST DRY PV-II 150 (mod. vertical)



MICROPROCESSOR CONTROL OF TEMPERATURE AND STERILIZATION CYCLE, ATMOSPHERIC AIR PURGE:

AUTESTER P 1,5 (mod. vertical)
PRESOCLAVE II 50 (mod. vertical)
PRESOCLAVE II 80 (mod. vertical)







#### **SUMMARY TABLE OF MODEL RANGE**

#### **QUICK OVERVIEW**

MODELSPart No.System DRYCapacity lifresTemperature of Capacity lifresPressure to BarPower barControl of Control of Cont	COMMINANT INDEE OF MICES	LIMITOL									QUION OFFICE
MED 12         4001756         NO         12         121 and 134         1         and 2         1800 Pressure thermostat         Atmospheric         Vertical bench top           MED 20         4001757         NO         20         121 and 134         1         to 2         2500 Pressure thermostat         Atmospheric         Vertical           PRESOCLAVE II 50         4001725         NO         50         115 to 134         0.62 to 2         3600 Electronic controller         Atmospheric         Vertical           PRESOCLAVE II 80         4002136         NO         80         115 to 134         0.62 to 2         3600 Electronic controller         Atmospheric         Vertical           AUTESTER P 1,5         4001726         NO         1.5         105-121 and 134 0.21-1 and 2         1100 Microprocessor         Atmospheric         Vertical           AUTESTER ST DRY PV-B 12         4001727 YES         12         121 and 134 1 and 2         1800 Microprocessor         Purged vacuum Horizontal bench top           AUTESTER ST DRY PV-B 23         4001731 YES         23         121 y 134 1 and 2         2300 Microprocessor         Purged vacuum Horizontal bench top           AUTESTER ST DRY PV-II 25         4002415 YES         25         105 to 134 0.21 to 2         2510 Microprocessor         Purged vacuum Vertical	MODELS	Part No.	System DRY		Temperature °C				Control		Туре
MED 20 4001757 NO 20 121 and 134 1 to 2 2500 Pressure thermostat Atmospheric Vertical PRESOCLAVE II 50 4001725 NO 50 115 to 134 0.62 to 2 3600 Electronic controller Atmospheric Vertical PRESOCLAVE II 80 4002136 NO 80 115 to 134 0.62 to 2 3600 Electronic controller Atmospheric Vertical AUTESTER P 1,5 4001726 NO 1.5 105-121 and 134 0.21-1 and 2 1100 Microprocessor Atmospheric Vertical AUTESTER ST DRY PV-B 12 4001727 YES 12 121 and 134 1 and 2 1800 Microprocessor Purged vacuum Horizontal bench top AUTESTER ST DRY PV-B 18 4001728 YES 18 121 and 134 1 and 2 1800 Microprocessor Purged vacuum Horizontal bench top AUTESTER ST DRY PV-B 23 4001731 YES 23 121 y 134 1 and 2 2300 Microprocessor Purged vacuum Horizontal bench top AUTESTER ST DRY PV-II 25 4002415 YES 25 105 to 134 0.21 to 2 2510 Microprocessor Purged vacuum Horizontal bench top AUTESTER ST DRY PV-II 50 4002515 YES 50 105 to 134 0.21 to 2 3600 Microprocessor Purged vacuum Vertical AUTESTER ST DRY PV-II 80 4002425 YES 80 105 to 134 0.21 to 2 3600 Microprocessor Purged vacuum Vertical	MICRO 8	4001745	NO	8	121 and 134	1	and 2	1000	Pressure thermostat	Manual	Vertical bench top
PRESOCLAVE II 50 4001725 NO 50 115 to 134 0.62 to 2 3600 Electronic controller Atmospheric Vertical  PRESOCLAVE II 80 4002136 NO 80 115 to 134 0.62 to 2 3600 Electronic controller Atmospheric Vertical  AUTESTER P 1,5 4001726 NO 1.5 105-121 and 134 0.21-1 and 2 1100 Microprocessor Atmospheric Vertical  AUTESTER ST DRY PV-B 12 4001727 YES 12 121 and 134 1 and 2 1800 Microprocessor Purged vacuum Horizontal bench top  AUTESTER ST DRY PV-B 18 4001728 YES 18 121 and 134 1 and 2 1800 Microprocessor Purged vacuum Horizontal bench top  AUTESTER ST DRY PV-B 23 4001731 YES 23 121 y 134 1 and 2 2300 Microprocessor Purged vacuum Horizontal bench top  AUTESTER ST DRY PV-II 25 4002415 YES 25 105 to 134 0.21 to 2 2510 Microprocessor Purged vacuum Horizontal bench top  AUTESTER ST DRY PV-II 50 4002515 YES 50 105 to 134 0.21 to 2 3600 Microprocessor Purged vacuum Vertical  AUTESTER ST DRY PV-II 80 4002425 YES 80 105 to 134 0.21 to 2 3600 Microprocessor Purged vacuum Vertical	MED 12	4001756	NO	12	121 and 134	1	and 2	1800	Pressure thermostat	Atmospheric	Vertical bench top
PRESOCLAVE II 80 4002136 NO 80 115 to 134 0.62 to 2 3600 Electronic controller Atmospheric Vertical  AUTESTER P 1,5 4001726 NO 1.5 105-121 and 134 0.21-1 and 2 1100 Microprocessor Atmospheric Vertical  AUTESTER ST DRY PV-B 12 4001727 YES 12 121 and 134 1 and 2 1800 Microprocessor Purged vacuum Horizontal bench top  AUTESTER ST DRY PV-B 18 4001728 YES 18 121 and 134 1 and 2 1800 Microprocessor Purged vacuum Horizontal bench top  AUTESTER ST DRY PV-B 23 4001731 YES 23 121 y 134 1 and 2 2300 Microprocessor Purged vacuum Horizontal bench top  AUTESTER ST DRY PV-II 25 4002415 YES 25 105 to 134 0.21 to 2 2510 Microprocessor Purged vacuum Horizontal bench top  AUTESTER ST DRY PV-II 50 4002515 YES 50 105 to 134 0.21 to 2 3600 Microprocessor Purged vacuum Vertical  AUTESTER ST DRY PV-II 80 4002425 YES 80 105 to 134 0.21 to 2 3600 Microprocessor Purged vacuum Vertical	MED 20	4001757	NO	20	121 and 134	1	to 2	2500	Pressure thermostat	Atmospheric	Vertical
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AUTESTER ST DRY PV-B 12 4001727 YES 12 121 and 134 1 and 2 1800 Microprocessor Purged vacuum Horizontal bench top AUTESTER ST DRY PV-B 18 4001728 YES 18 121 and 134 1 and 2 1800 Microprocessor Purged vacuum Horizontal bench top AUTESTER ST DRY PV-B 23 4001731 YES 23 121 y 134 1 and 2 2300 Microprocessor Purged vacuum Horizontal bench top AUTESTER ST DRY PV-II 25 4002415 YES 25 105 to 134 0.21 to 2 2510 Microprocessor Purged vacuum Horizontal bench top AUTESTER ST DRY PV-II 50 4002515 YES 50 105 to 134 0.21 to 2 3600 Microprocessor Purged vacuum Vertical AUTESTER ST DRY PV-II 80 4002425 YES 80 105 to 134 0.21 to 2 3600 Microprocessor Purged vacuum Vertical	PRESOCLAVE II 80	4002136	NO	80	115 to 134	0.62	2 to 2	3600	Electronic controller	Atmospheric	Vertical
AUTESTER ST DRY PV-B 18 4001728 YES 18 121 and 134 1 and 2 1800 Microprocessor Purged vacuum Horizontal bench top AUTESTER ST DRY PV-B 23 4001731 YES 23 121 y 134 1 and 2 2300 Microprocessor Purged vacuum Horizontal bench top AUTESTER ST DRY PV-II 25 4002415 YES 25 105 to 134 0.21 to 2 2510 Microprocessor Purged vacuum Horizontal bench top AUTESTER ST DRY PV-II 50 4002515 YES 50 105 to 134 0.21 to 2 3600 Microprocessor Purged vacuum Vertical AUTESTER ST DRY PV-II 80 4002425 YES 80 105 to 134 0.21 to 2 3600 Microprocessor Purged vacuum Vertical	AUTESTER P 1,5	4001726	NO	1.5	105-121 and 134	0.21-	1 and 2	1100	Microprocessor	Atmospheric	Vertical
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AUTESTER ST DRY PV-II 25 4002415 YES 25 105 to 134 0.21 to 2 2510 Microprocessor Purged vacuum Horizontal bench top AUTESTER ST DRY PV-II 50 4002515 YES 50 105 to 134 0.21 to 2 3600 Microprocessor Purged vacuum Vertical AUTESTER ST DRY PV-II 80 4002425 YES 80 105 to 134 0.21 to 2 3600 Microprocessor Purged vacuum Vertical	<b>AUTESTER ST DRY PV-B</b> 18	4001728	YES	18	121 and 134	1	and 2	1800	Microprocessor	Purged vacuum	Horizontal bench top
AUTESTER ST DRY PV-II 50         4002515         YES         50         105 to 134         0.21         to 2         3600         Microprocessor         Purged vacuum         Vertical           AUTESTER ST DRY PV-II 80         4002425         YES         80         105 to 134         0.21         to 2         3600         Microprocessor         Purged vacuum         Vertical	<b>AUTESTER ST DRY PV-B 23</b>	4001731	YES	23	121 y 134	1	and 2	2300	Microprocessor	Purged vacuum	Horizontal bench top
AUTESTER ST DRY PV-II 80 4002425 YES 80 105 to 134 0.21 to 2 3600 Microprocessor Purged vacuum Vertical	<b>AUTESTER ST DRY PV-II 25</b>	4002415	YES	25	105 to 134	0.21	to 2	2510	Microprocessor	Purged vacuum	Horizontal bench top
	<b>AUTESTER ST DRY PV-II 50</b>	4002515	YES	50	105 to 134	0.21	to 2	3600	Microprocessor	Purged vacuum	Vertical
AUTESTER ST DRY PV-II 150 4002426 YES 150 105 to 134 0.21 to 2 7500 Microprocessor Purged vacuum Vertical	<b>AUTESTER ST DRY PV-II 80</b>	4002425	YES	80	105 to 134	0.21	to 2	3600	Microprocessor	Purged vacuum	Vertical
	<b>AUTESTER ST DRY PV-II</b> 150	4002426	YES	150	105 to 134	0.21	to 2	7500	Microprocessor	Purged vacuum	Vertical



### Autoclaves for sterilization "MICRO 8", "MED 12" and "MED 20"

PRESSURE REGULATOR THERMOSTAT OF 1 AND 2 bar. TEMPERATURES 121 °C AND 134 °C. VERTICAL DESKTOP MODELS. "MICRO 8" CAPACITY: 8 LITRES. "MED 12" CAPACITY: 12 LITRES. VERTICAL STAND MODEL "MED 20" CAPACITY: 20 LITRES.

#### An economic alternative. Semiautomatics.

#### **SAFETY:**

SAFETY VALVE: PREVENTS THE PRESSURE WITHIN THE AUTOCLAVE OVERPASSING THE MAXIMUM SET LIMIT.

SAFETY PRESSURE: DISCONNECTS POWER TO THE HEATER IN CASE OF OVERPASSING THE PRESSURE SET LIMIT.

SAFETY THERMOSTAT: DISCONNECTS THE HEATING IN CASE OF OVERTEMPERATURE OR LACK OF WATER IN THE TANK.

THERMALLY INSULATED LID MADE OF MOLDED THERMOPLASTIC.

#### **COMMON FEATURES**

AISI 304 stainless steel external case and top.

Stainless steel chamber and lid, with easy opening.

INCOLOY special stainless steel heater element, which provides long life, low corrosion and high temperatures resistance.

Manual air purge when starting ("MICRO 8" model).

Automatic atmospheric purge ("MED 12" and "MED 20" models).

Safety device to prevent lid opening.

Starting main switch.

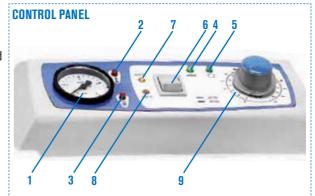


REAR PART
Mains source.
Two fuse carriers.

Safety thermostat.



SIDE PART
Drain outlet.
Steam and drainage selective valve.



- 1. Pressure gauge.
- 2. Over temperature alarm light indicator.
- 3. Door open light indicator.
- 4. Sterilization phase light indicator.
- **5.** Sterilization end of cycle light indicator.
- 6. Pressure selector 121°C or 134°C.
- 7. Light indicator at 121°C.
- 8. Light indicator at 134°C.
- 9. Timing from 0 to 60'.



### Autoclave for sterilization "MICRO 8"

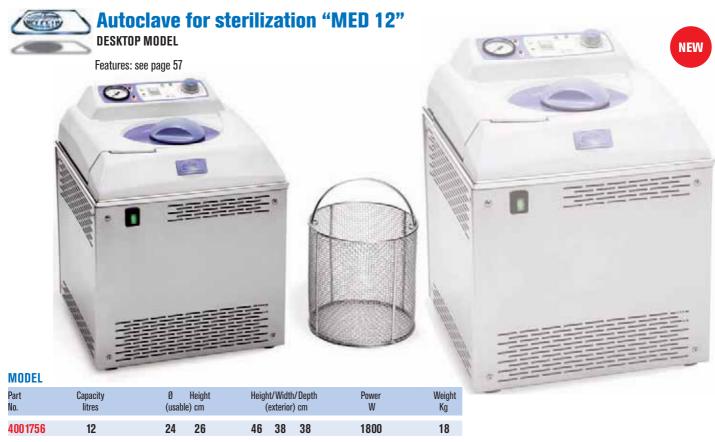
DESKTOP MODEL



#### MODEL

Part	Capacity	Ø Height	Height/Width/Depth	Power	Weight
No.	litres	(usable) cm	(exterior) cm	W	Kg
4001745	8	24 15	40 38 38	1000	13

It comes complete with a stainless steel wire basket of Ø 22x14cm high. Part no. 1004771.



It comes complete with a stainless steel wire basket of Ø 22x24cm high. Part no. 1004772.



It comes complete with two stainless steel wire baskets of Ø 22x24cm and Ø 22x14cm high. Part no. 1004772 and 1004771.



### **Autoclaves for sterilization "Presoclave II" 50 and 80**



MICROPROCESSOR TEMPERATURE AND CYCLE CONTROL AND ATMOSPHERIC PURGE. ELECTRONIC CONTROL OF TIME AND TEMPERATURE RANGE FROM 115 °C TO 134 °C. (0.62 TO 2 bar). CONFORMS TO APPARATUS PRESSURE REGULATION DIRECTIVES.

**VERTICAL MODEL: 50 AND 80 LITRES.** 

#### **SAFETY:**

SAFETY OVER PRESSURE VALVE: PREVENTS OVER PRESSURE ABOVE THE MAXIMUM SET LIMIT.

SAFETY PRESSURE SWITCH: DISCONNECTS POWER TO THE HEATER IF THE UNIT EXCEEDS THE MAXIMUM PRESSURE LIMIT.

SAFETY THERMOSTAT AND WATER LEVEL: DISCONNECT POWER TO THE HEATER IF INSUFFICIENT WATER OR OVER TEMPERATURE.

SAFETY LID: PREVENTS THE LID BEING OPENED IF THE CHAMBER IS UNDER PRESSURE.

SAFETY INSULATION: THERMALLY INSULATED LID.

#### An economic alternative, semi-automatic

#### **FEATURES**

External case made from stainless steel.

INCOLOY stainless steel heater elements, hard waring, resistant to corrosion and high temperatures.

Sterilization chamber and door made from stainless steel.

Automatic purge to atmosphere

Lid,6 point closure.

### **CONTROL PANEL** 13 8 9 10 1. Pressure gauge. 11 2. Illuminated alarm indicator. 12 3. Illuminated indicator end of cycle.

- 4. Illuminated indicator door open
- 5. Temperature display.
- 6. Time display
- 7. Temperature set pushbutton (range from 115 °C to 134 °C).
- 8. Pushbutton increase value.
- 9. Push button START
- 10. Push Button STOP
- 11. Push button Reduce value.
- 12. Push button select time, (range from 3' to 99').
- 13. Push button open lid.

MODELS	Part No.	Capacity litres	Ø Height (usables cm)	Height / Width / Depth (exterior cm)	Power W	Weight Kg
PRESOCLAVE II 50	4001725	50	30 70	117 48 62	3000	75
PRESOCLAVE II 80	4002136	80	40 60	107 58 72	3600	100

Does not include baskets and drums, order separately.

#### **ACCESSORIES:** AISI 304 Stainless steel wire baskets and drums.

For Presoclave II 50, Part. no: 4001725.

Capacity, 3 baskets Ø 25 and 20 cm. height. Part No. 1000495

For Presoclave II 80, Part. no: 4002136.

Capacity, 2 baskets Ø 36 and 28 cm. height. Part No. 1000496

Sterilization drum made from AISI 304 stainless steel.

For Presoclave II 50, Part. no: 4001725.

Capacity, 3 drum Ø 25 and 18 cm. height. Part No. 1002418

For Presoclave II 80, Part. no: 4002136.

Capacity, 2 drum Ø 35 and 27 cm. height. Part No. 1002419

**Detergent Bio-Sel.** 

Water distillation unit especially for autoclaves

(see page 61).





#### **BACK VIEW:**

- 1. Mains power.
- 2. Safety valve.
- 3. Steam empty valve.
- 4. Safety thermostat
- 5. Drain selector valve.

**OPTIONS:** That needs to be factory installed: Pt100 second sensor only temperature reader (see page 62).



### **Autoclaves for sterilization "Autester ST DRY PV II"**



MICROPROCESSOR PROCESS CONTROL.

**AUTOMATIC VACUUM DRY AND PURGE "PREVACUUM"** 

PROGRAMMABLE TEMPERATURE FROM 105 °C TO 134 °C (0.21 TO 2 bar).

CONFORMS TO APPARATUS PRESSURE REGULATION DIRECTIVES.

VERTICAL FLOOR STANDING MODEL: 50, 80 AND 150 LITRES.

#### **CONFORMITY**

SAFETY FOR EQUIPMENT FOR LABORATORY USE EN 61010-1

SAFETY FOR STERILIZER EQUIPMENT FOR LABORATORY USE EN 61010-2-040

ELECTROMAGNETIC COMPATIBILITY FOR EQUIPMENT FOR LABORATORY USE.

#### **FEATURES**

Stainless steel exterior and top.

Stainless steel lid.

Lid, six closure point system.

Pulsed vacuum system and atmosphere purge.

EN 61326

Incorporated steam generator, connected to the main chamber.

Water reservoir for clean water for the steam generator boiler.

External water connection if required.

6 function modes.

RS 232 for PC parameters printing (back side).

Printer output. (optional).

USB adapter for parameters memorization (optional).

Connection for a second temperature sensor.

Memory for 9 customer set programs.

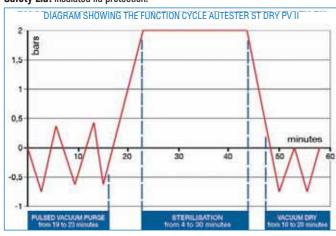
#### **SAFETY**

Safety: The lid cannot be opened if the chamber is under pressure.

Safety valve: Prevents over pressure over the maximum limit.

Safety pressure switch: switches the heater power off to if over pressure.

Safety Lid: insulated lid protection.





- 1. LCD parameter indicator.
- 2. MONO single button control multifunction processor.
- 3. LED "in" operation.
- 4. Push button Start / Stop.
- 5. USB adapter or printer (optional).
- 6. Open Lid knob.
- 7. USB function light indicator





#### **BACK VIEW**

- 1. Mains input.
- 2. External water supply.
- 3. Safety valve.
- 4. Vacuum vapour valve.
- 5. Air in filter valve.
- 6. Safety thermostat.
- 7. Safety thermostat.
- 8. Empty tank valve.
- 9. Drain tank valve.
- 10. RS232 connector.
- 11. 2nd Temperature sensor con nection.

#### **CONFORMITY**

The microprocessor controls the air extraction, sterilization and dry process from preset values set by the operator. Controlled parameters are:

- Sterilization temperature from 105 °C to 134 °C
- Sterilization time from 3' to 59'.
- Drying time from 20' to 60'
- Programs-0 to 9 user configurable
- Six pre-set functions:
  - Solids 1
  - Solids 2 fractions
  - Solids 3 fractions
  - Dry
  - Liquids
  - Liquids 2 temperature probes

- Verification tests
  - Vacuum
  - Bowie Dick
- Configuration
  - Units
  - Languages ( Spanish, English, and French).
  - Printer or USB adapter.
  - Timer: date/hour
  - Water connection external: on/off.
- Password
- Calibration
  - Temperature probe 1
  - Temperature probe 2
  - Water fill

Error messages of functions and program execution are displayed and an acoustic alarm sounds. The vapour generator automatically cuts out.

#### MESSAGES:

1. E 2PROM 10. TEMPERATURE LOW FAULT 2. RTC FAULT 11. INPUT ERROR 3. SENSOR PRECISION 12. STERILIZATION 4. HEATER PROBE 13. LEVEL 1 5. CHAMBER PROBE 14. LEVEL 2 6. OVER PRESSURE 15. DOOR 7. VACUUM 16. PRINTER NO PAPER 8. PRESSURE 17 PAPER JAM



MODELS	Part No.	Dry	Capacity litres	Ø / Height (usables) cm	Height / Width / Depth (exterior) cm	Temp. ° C	Water Reservoir H <sub>2</sub> O capacity.	Basket size	Power W	Weight Kg
AUTESTER ST DRY PV II 50	4002515	Yes	50	30 63	117 48 62	105 to 134	10	3	3000	108
AUTESTER ST DRY PV II 80	4002425	Yes	80	40 60	107 58 72	105 to 134	10	2	3600	136
AUTESTER ST DRY PV II 150*	4002426	Yes	150	50 70	118 80 95	105 to 134	20	3	7500*	250

Comes without baskets and drums.

9. BOILER TEMPERATURE

18. ELECTRICAL FAULT

#### **COMPLEMENTS:** Factory fitted options.





**ACCESSORIES:** AISI 304 Stainless steel wire baskets and drums.

For Autester ST DRY PV-II 50, Part No: 4002515.

Capacity, 3 baskets Ø 25,5 and 20 cm. height. Part No: 1000495

For Autester ST DRY PV-II 80, Part No: 4002425.

Capacity, 2 baskets Ø 36 and 28 cm. height. Part No: 1000496

For Autester ST DRY PV-II 150, Part No: 4002426.

Capacity, 3 baskets Ø 44,5 and 22 cm. height. Part No: 1000780

Sterilization drum made from AISI 304 stainless steel. For Autester ST DRY PV-II 50, Part No: 4002515.

Capacity, 3 drum  $\emptyset$  25 and 18 cm. height. Part No. 1002418

For **Autester ST DRY PV-II 80**, Part No: 4002425.

Capacity, 2 drum Ø 35 and 27 cm. height. Part No. 1002419

Detergent Bio-Sel.

Water distillation unit especially for autoclaves.

(see page 62).

- 1. Thermal printer continuous paper roll with print out of temperature, pressure, time and mode. Part No. 4002417
- 2. USB adapter model. Pen-Drive included (Memory board) for data storage. Part No. 4120132

Pt100 Sensor (See page 62).

№ Programme	Description	Temperature Sterilization	Time Sterilization	Time Dry	Purge
0	Free	-	-	-	-
1	Unwrapped instruments	134 °C	4 min	15 min	2 (1)
2	Wrapped instruments	134 °C	12 min	30 min	3 (2)
3	CJD	134 °C	20 min	20 min	3 (2)
4	Delicate unwrapped	121 °C	15 min	15 min	2 (1)
5	Delicate wrapped	121 °C	30 min	30 min	3 (2)
6	Disinfecting	105 °C	25 min	15 min	1 (3)
7	Liquids	121 °C	30 min	-	1 (3)
8	Solids	121 °C	15 min	30 min	1 (3)
9	Solids	134 °C	4 min	30 min	1 (3)

- (1) Double Vacuum purge.
- (2) Triple Vacuum purge.
- (3) Atmospheric purge (No vacuum).

<sup>\*</sup> The part number 4002426 due to its power rating is only manufactured for three phase 230V or 400V. Specify preference when ordering.

#### **OPTIONS:** for vertical autoclaves, need to be factory fitted.



Pt 100 Sensor. 2<sup>nd</sup> Probe for reading sample temperature.

To guarantee in all circumstances that the system has completed the cycle to the set time and temperature parameters, the Autester ST DRY PV II autoclave can be installed with a temperature probe that can be placed within the culture flask, residual packets etc.

When the probe is connected to the controller of the autoclave, it is automatically recognised by the micro-processor, whereby the real time temperature values detected by the probe, are displayed and printed. For autoclaves PRESOCLAVE II this Pt100 sensor only reads the temperature with an external thermometer. Part No. 4001219

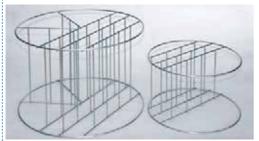
#### **ACCESSORIES FOR VERTICAL AUTOCLAVES**



#### AISI 304 stainless steel wire baskets.

Part No.	Ø cm	Height 1	Suitable for autoclaves Part No.	Number of baskets
1004771	22	14	4001745	1
1004772	22	24	4001775	1
1004771	22	14	4001757*	1
1004772	22	24	4001757*	1
1000495	25,5	20	4001725 - 4002515	3
1000496	36	28	4002136 - 4002425	2
1000780	44,5	22	4002426	3

Note:\* For autoclave Part No. 4001757 supplied with 1 basket Part No. 1004771 + 1 basket Part No. 1004772



AISI 316 stainless steel wire dividers for autoclave baskets.

Dart No

1001217 4 divider compartments for basket part no. 1000495.

1001218 6 divider compartments for basket part no. 1000496.

1001222 7 divider compartments for basket part no. 1000780.



#### Sterilization Drums.

Part No.	Ø	Height cm	Suitable for autoclaves Part No.	Capacity Drums
1002418	25	18	4001725 - 4002515	3
1002419	35	27	4002136 - 4002425	2
1002420	28	18	Not suitable for our a	utoclaves.



#### Water distiller, specially for autoclaves "DEST-4".

Distillation capacity: 1.5 litres/hour. Internal capacity 4 litres. Case made from thermo resistant plastic.

Internal stainless steel.

Cooling by forced air though a condenser. Without glass heater elements.

Easy to use. Safety cut out system if over temperature due to insufficient water.

Comes complete with a 4 litre three way dispenser plastic bottle with filter.

Note: for daily use it is recommended to change the filter every 3 months.

Part No.	Capacity	Conductivity	Ø Height	Power	Weight
	Distillation litre/Hour	µs/cm	cm	W	Kg
4001729	1.5	5	29 39	750	3.5

Spare: Dispenser spout with filter. Part No. 4001730



#### Detergent "BIO-SEL"

We recommend the use of BIO-Sel detergent for cleaning, it is also biodegradable and free from Phosphates.

Part No.

**1000025** Capacity 1 litre.

**1000026** Capacity 4 litres.

**1000852** Box of 12 x 1 litre flasks.

**1000853** Box of 4 x 4 litre flasks.



### **Autoclave for liquids and solids sterilization "Autester ST DRY PV II" 25**



**CAPACITY: 25 LITRES.** 

CONFORMS TO THE REGULATION - 97/23/CEE EQUIPMENT UNDER PRESSURE.

#### Complete selection of programs. Displays in Spanish - English - French.

#### **FEATURES**

Sterilization chamber and lid made from AISI 316 stainless steel.

External case epoxy coated.

Digital control of all autoclave operations.

Large back lit LCD 2 x 24 character display.

Air filter, purifies air before entering in the sterilization chamber.

Separate clean water reservoir and waste water. RS-232 Interface output of parameters to a computer, for printer or USB adapter.

#### **SAFETY**

Safety valve.

Prevents the door being opened if under pressure or high temperature is produced.

Temperature safety thermostat.

Door closed correctly detector

Thermally protected lid.

#### **CONTROL PANEL**



- 1 LCD parameter display.
- 2 Mono control button of multi functions that selects:
- 3 LED in operation.
- 4 Push button Start Stop.

Error messages of functions or execution of a program are displayed and an acoustic alarm sounds. The vapour generator automatically cuts out.

#### MESSAGES:

1. E 2PROM	10. TEMPERATURE LOW FAULT
2. RTC FAULT	11. INPUT ERROR
3. SENSOR PRECISION	12. STERILIZATION
4. HEATER PROBE	13. LEVEL 1
5. CHAMBER PROBE	14. LEVEL 2
6. OVER PRESSURE	15. DOOR
7. VACUUM	16. PRINTER NO PAPER
8. PRESSURE	17 Paper Jam
9. BOILER TEMPERATURE	18. ELECTRICAL FAULT

#### PARAMETERS AND PROGRAMS PRE INSTALLED IN THE AUTOCLAVE MICROPROCESSOR (Note: All these parameters are adjustable by the user)

Programme	Description	lemperature Sterilization	Time Sterilization	Time Dry	Purge			
0	Free	-	-	-	-			
1	Unwrapped instruments	134 °C	4 min	15 min	2 (1)			
2	Wrapped instruments	134 °C	12 min	30 min	3 (2)			
3	CJD	134 °C	20 min	20 min	3 (2)			
4	Delicate unwrapped	121 °C	15 min	15 min	2 (1)			
5	Delicate wrapped	121 °C	30 min	30 min	3 (2)			
6	Disinfecting	105 °C	25 min	15 min	1 (3)			
7	Liquids	121 °C	30 min	-	1 (3)			
8	Solids	121 °C	15 min	30 min	1 (3)			
9	Solids	134 °C	4 min	30 min	1 (3)			
(1) Double Vacuum nurge								

- (2) Triple Vacuum purge.
- (3) Atmospheric purge (No vacuum).



The microprocessor controls the air extraction, sterilization and dry process from preset values set by the operator. Controlled parameters are:

- Sterilization temperature from 105 °C to 134 °C
- Sterilization time from 3' to 59'.
- Drying time from 20' to 60'
- Programs-0 to 9 user configurable
- Six pre-set functions:
  - Solids 1
  - Solids 2 fractions
  - Solids 3 fractions
  - Dry
  - Liquids
  - Liquids 2 temperature probes

- Verification tests
  - Vacuum
  - Bowie Dick
- Configuration
  - Units
  - Languages (Spanish, English, and French).
  - Printer or USB adapter.
  - Timer: date/hour
- Password
- Calibration
  - Temperature probe 1
    - Temperature probe 2
    - Water fill

MODEL	Part No.	Capacity litres	Ø/Depth (usables) cm	Height/Width/Depth (exterior) cm	Power W	Weight Kg
AUTESTER ST DRY PV II 25	400241	5 25	30 35	48 46 55	2510	52



Comes complete with three trays, extractor forceps, and additional support for instruments and sterile wrapping bags.

### **ACCESSORIES**

**USB** adapter model.

Pen-Drive included (Memory board) for data storage. Part No: 4120131

Ink Printer (no thermal).

Paper size 2 1/4" (56 mm) wide. Includes communications and power cable.

Model Height/Width/Depth Part No. cm



Water distiller especially for Autoclaves. (See page 62). Bag sealers (See page 67).







### **Autoclave for sterilization "Autester ST DRY PV" Class B**





AUTOMATIC VACUUM DRY AND PURGE. PROGRAMS TO 121 °C AND 134 °C (1 AND 2 bar). MODEL HORIZONTAL. CAPACITY: 12, 18, AND 23 LITRES.

#### **APPLICATIONS**

"Class B" autoclaves are used within the field of general medicine, dentistry, veterinary, tattoo parlours and sterilization applications in general, to sterilize any material that could have been in contact with body fluids including blood.

The general capabilities of the instrument are regulated by EN 13060 that guarantees the differing sterilization applications.

The normal processes include: Solids with and without wrapping, porous material with and without wrapping and utensils that have cavities and holes (e.g. dentistry materials.)

To guarantee sterilization of these materials the "AUTESTER ST DRY PV" Class B, autoclaves, have an efficient staged vacuum, that performs a complete extraction of air that allows penetration of the steam vapour.

The same vacuum system is used to obtain the dry phase, which is required for perfect storage of sterilized materials.

The "AUTOCLAVES ST DRY PV" Class B includes verification and validation programs.

#### **CONFORMITY:**

SMALL GENERAL PURPOSE STEAM STERILIZERS. EN 13060

EN 61010-1 **EQUIPMENT SAFE FOR LABORATORY USE.** 

SAFETY FOR STERILIZER EQUIPMENT FOR LABORATORY USE EN 61010-2-040

EN 61326 ELECTROMAGNETIC COMPATIBILITY FOR EQUIPMENT USED IN THE LABORATORY.

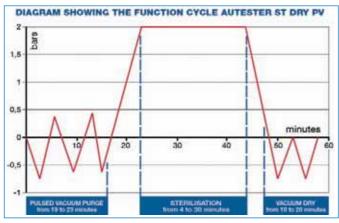
#### **SAFETY:**

SAFETY VALVE: PREVENTS THE PRESSURE EXCEEDING THE MAXIMUM SET LIMIT.

SAFETY THERMOSTAT: DISCONNECTS THE HEATER AGAINST OVER TEMPERATURE OR LOW WATER IN THE RESERVOIR.

THERMALLY INSULATED LID.





Staged fractional vacuum: Extracts air from the load that permits absolute steam vapour penetration.

Sterilization stage: Sterilization within the time and temperature selected.

Dry cycle: Extracts the humidity from the load leaving it suitable for storage.



### **Autoclave for sterilization Autester "ST DRY PV" 12 Class B**

CAPACITY: "ST DRY PV": 12 LITRES.





#### According to directive: 97/23/CEE equipment under presure, 3.3 and 93/42/CEE For medical devices.

#### **FFATURES**

Stainless steel internal chamber.

Staged vacuum purge.

Dry by vacuum

Incorporated steam generator.

Water reservoir to supply the chamber

High vapour penetration of porous material

Used in digestive studies, ophthalmology, operating

Printer interface.

USB adapter for parameters memorization (optional). **SAFETY** 

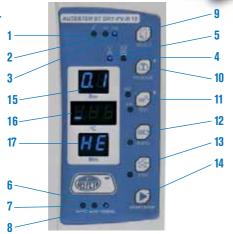
**Safety valve.** Prevents over pressure over the maximum working limit.

**Safety thermostat.** Disconnects power to the heater if over temperature or low water in the reservoir.

Thermally protected lid.



#### **CONTROL PANEL**



#### TEMPERATURE CONTROL AND AUTOMATIC MICROPROCESSOR CYCLE.

- 1. Textile materials
- **2.** 121 °C.
- 3. 134 °C.
- 4. Wrapped solids.
- 5. Solids (Not wrapped).
- 6. Low level water indicator.7. Autoclave ready for operation.
- 8. Sterilization cycle in process
- 9. Program selection.

- 10. Select wrapped or non wrapped.
- **11.** Test.
- 12. Fast sterilization.
- 13. "maintain hot" the chamber.
- 14. Preheat.
- 15. Pressure indicator (bar).
- **16.** Temperature indicator (°C).
- 17. Time Indicator (min.).

CYCLES	134 °C Wrapped	134 °C Not Wrapped	121 °C Wrapped	121 °C Not Wrapped	Textiles	Test Bowie Dick	Test Vacuum
Sterilization Temperature	134 °C	134 °C	121 °C	121 °C	134 °C	134 °C	-
Sterilization pressure	2.1 bar	2.1 bar	1.1 bar	1.1 bar	2.1 bar	-	2.1 bar
Vacuum purge time	8 min.	4 min.	8 min.	4 min.	8 min.	-	-
Sterilization time	12 min.	4 min.	30 min.	20 min.	12 min.	3.5 min.	10 min.
Dry time	10 min.	10 min.	10 min.	10 min.	15 min.	1 min.	-

MODEL	Part No.	Capacity litres	Ø / depth cm	Exte Height	ernal Dimensi cm Width	ons Depth	Power W	Weight kg
AUTESTER ST DRY PV B 12	4001727	12	20 35	39.2	48.7	60	1800	42.2



Comes complete with:

spare joint, door adjustment key, support with three trays, extractor forceps, empty water filter and waste water out.

#### **ACCESSORIES**

#### USB adapter model.

Pen-Drive included (Memory board) for data storage.

Part No: 4120130

Ink Printer (no thermal).

Paper size 2 1/4" (56 mm) wide.

Includes communications and power cable.

Power: DC 5V 3A Part No: 4120123

Water distiller especially for Autoclaves. (See page 62).

Bag sealers (See page 67).





# Autoclave for sterilization "Autester ST DRY PV" 18 Class B "ST DRY PV" 23 Class B





CAPACITY: "ST DRY PV" 18: 18 LITRES. "ST DRY PV" 23: 23 LITRES..

#### According to directive: 97/23/CEE equipment under presure, 3.3 and 93/42/CEE For medical devices.

#### **FEATURES**

Stainless steel internal chamber.

Staged vacuum purge.

Dry by vacuum

Incorporated steam generator.

Water reservoir to supply the chamber

High vapour penetration of porous material

Used in digestive studies, ophthalmology, operating theatres etc .

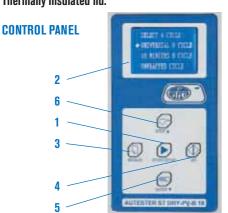
Printer interface.

USB adapter for parameters memorization (optional). **SAFETY** 

**Mechanism door lock**, prevents the door being opened accidentally.

**Safety valve.** Prevents over pressure over the maximum working limit.

**Safety thermostat.** Disconnect power to the heaters if over temperature or low water in the reservoir are produced. **Thermally insulated lid.** 





#### TEMPERATURE CONTROL AND AUTOMATIC MICROPROCESSOR CYCLE.

- 1. Start Stop.
- 2. LCD screen.
- 3. Cancel Menu.
- 4. Validation.
- 5. Rapid cycle. Down cursor.
- 6. Validation time. Up cursor.

CYCLES	134 °C Wrapped	134 °C Not Wrapped	134 °C Not Wrapped Fast	121 °C Wrapped	Test Bowie Dick	Test Vacuum
Sterilization Temperature	134 °C	134 °C	134 °C	121 °C	134 °C	-
Sterilization pressure	2.1 bar	2.1 bar	2.1 bar	1.1 bar	-	2.1 bar
Vacuum purge time	10 min.	10 min.	4 min.	10 min.	-	-
Sterilization time	18 min.	4 min.	4 min.	16 min.	3.5 min.	10 min.
Dry time	10 min.	10 min.	10 min.	10 min.	1 min.	-

MODEL	Part No.	Capacity litres	Ø x depth cm	Externa Height	al Dimensions cm Width	Depth	Power W	Weight kg
AUTESTER ST DRY PV 18	4001728	18	25 35	49.5	46	60	1800	46.6
AUTESTER ST DRY PV 23	4001731	23	25 45	49.5	55	76	2300	48



Comes complete with:

spare joint, door adjustment key, support with three trays, extractor forceps, empty water filter and waste water out.

#### **ACCESSORIES**

#### USB adapter model.

Pen-Drive included (Memory board) for data storage.

Part No: 4120130

Ink Printer (no thermal).

Paper size 2 1/4" (56 mm) wide.

Includes communications and power cable.

Power: DC 5V 3A Part No: **4120123** 

Water distiller especially for Autoclaves. (See page 62).

Bag sealers (See page 67).





### Bag sealer "S-400"

SUITABLE FOR POLYPROPYLENE-POLYESTER STERILISING BAGS WITH A PAPER BASE.

#### **FEATURES**

Metal epoxy covered case. Pressure sealer. Manual cut.

Stainless steel AISI 304 reel support at the back.

#### CONTROL PANEL

Illuminated mains switch.

Lamp on when the thermostat has reached the pre-set working temperature.

#### **MODEL**

Part No.	Seal Width	Maximum seal	Height / Width / Depth	Power	Weight
	mm	length mm	(exterior) cm	W	Kg
4100041	9	270	12 35 21	200	5.3





Bag sealer "Seal-1000"
FOR POLYPROPYLENE AND POLYESTER BAGS WITH A STERI-LE PAPER BASE.

#### **FEATURES**

Metal construction with stainless steel tray.

Pressure sealer unit with lateral leaver with two bilateral cutting edges. Constant sealing temperature (from 180 °C and 200 °C).

External support for rolls of up to 240mm wide, with adjustable separator sides to accommodate different roll sizes.

#### **CONTROL PANEL**

Illuminated start switch. Indicator, optimum seal temperature.

Part No.	Seal width	Maximum seal	Height / Width / Depth	Power	Weight
	mm	length mm	(exterior) cm	W	Kg
4101712	10	260	30 36 43	400	6.5





Automatic bag sealer "Seal-Com" IN ACCORDANCE WITH DIN 58953 SECTION 7 STANDARD. FOR SEALING STERILE PAPER, POLYPROPYLENE-POLYESTER BAGS. CONTINUOUS SEALING, AUTOMATIC ADVANCE.

#### **Continuous Thermosealer**

#### **FEATURES**

Epoxy covered metallic exterior. Heating time: 4 minutes. Seal width: 9 mm. Sealing speed: 5 m/min.

Removable support tray made of AISI 304 stainless steel.

#### **CONTROL PANEL**

Luminous heater "ON" switch. Luminous motor "ON" switch. Start light for the operation of sealing bags.



Part No.	Height / Width / Depth	Width / Depth	Power	Weight
	(sealer) cm	(tray) cm	W	Kg
4100043	19 37 21	50 17	240	8.2



#### **SEALING MACHINE ACCESSORIES**



#### Rolls of paper for sterilization "Polisteril"

Paper base polypropylene and polyester bags showing differing ink prints of sterilized items.

Part No.	Bag width cm	Bag length m
4100075	7,5	100
4100100	10	100
4100200	20	100



#### Sterile paper "Policort" trimmer

Completely made of metal with back and reel support. for a capacity of 2 x 200mm or 4 x 100 mm wide reels. Circular cutting knife edge.

Measurements: 13 high x 51 wide x 32 cm deep.

Weight: 2.8 Kg. Part No. 4100045



Date stamping machine for sterile bags.

Part No. 4100046

STERILIZED 30 OCTOBER 2011 VALID FOR 3 MONTHS.

OPTIONS: Ultrasonic cleaning baths for dentistry, "Ultrasons-Digit" (see page 88). Dry sterilizer "DRYTIME" poupinel oven (see page 132).