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

• 50 Years of sterilization experience.

  • Quality and innovation.

  • A new dimension in design and technology

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.
ELECTRICAL AUTOCLAVES FOR STERILIZATION

“The process of scientific discovery is, in effect, a continual flight from wonder.”
Albert Einstein

Vertical desktop autoclaves
Pressure regulator

Vertical stand autoclaves.  
Microprocessor control and atmospheric purge

Vertical stand autoclaves  
Microprocessor control

Horizontal autoclaves  
Microprocessor control and fractional vacuum purge

Water distiller for autoclaves

Polypropylene and polyester bag sealers

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Page 63
Pages 64 to 66
Pages 62
Pages 67
Electrical Autoclaves for sterilization

SUMMARY TABLE OF MODEL RANGE

<table>
<thead>
<tr>
<th>MODELS</th>
<th>Part No.</th>
<th>System</th>
<th>Capacity</th>
<th>Temperature °C</th>
<th>Pressure bar</th>
<th>Power W</th>
<th>Control</th>
<th>Purge control</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>MICRO 8</td>
<td>4001745</td>
<td>NO</td>
<td>8</td>
<td>121 and 134</td>
<td>1 and 2</td>
<td>1000</td>
<td>Pressure thermostat</td>
<td>Manual</td>
<td>Vertical bench top</td>
</tr>
<tr>
<td>MED 12</td>
<td>4001756</td>
<td>NO</td>
<td>12</td>
<td>121 and 134</td>
<td>1 and 2</td>
<td>1800</td>
<td>Pressure thermostat</td>
<td>Atmospheric</td>
<td>Vertical bench top</td>
</tr>
<tr>
<td>MED 20</td>
<td>4001757</td>
<td>NO</td>
<td>20</td>
<td>121 and 134</td>
<td>1 to 2</td>
<td>2500</td>
<td>Pressure thermostat</td>
<td>Atmospheric</td>
<td>Vertical</td>
</tr>
<tr>
<td>PRESOCLAVE II 50</td>
<td>4001725</td>
<td>NO</td>
<td>50</td>
<td>115 to 134</td>
<td>0.62 to 2</td>
<td>3600</td>
<td>Electronic controller</td>
<td>Atmospheric</td>
<td>Vertical</td>
</tr>
<tr>
<td>PRESOCLAVE II 80</td>
<td>4002136</td>
<td>NO</td>
<td>80</td>
<td>115 to 134</td>
<td>0.62 to 2</td>
<td>3600</td>
<td>Electronic controller</td>
<td>Atmospheric</td>
<td>Vertical</td>
</tr>
<tr>
<td>AUTESTER P 1.5</td>
<td>4001726</td>
<td>NO</td>
<td>1.5</td>
<td>105-121 and 134</td>
<td>0.21-1 and 2</td>
<td>1100</td>
<td>Microprocessor</td>
<td>Atmospheric</td>
<td>Vertical</td>
</tr>
<tr>
<td>AUTESTER ST DRY PV-B 12</td>
<td>4001727</td>
<td>YES</td>
<td>12</td>
<td>121 and 134</td>
<td>1 and 2</td>
<td>1800</td>
<td>Microprocessor</td>
<td>Purged vacuum</td>
<td>Horizontal bench top</td>
</tr>
<tr>
<td>AUTESTER ST DRY PV-B 18</td>
<td>4001728</td>
<td>YES</td>
<td>18</td>
<td>121 and 134</td>
<td>1 and 2</td>
<td>1800</td>
<td>Microprocessor</td>
<td>Purged vacuum</td>
<td>Horizontal bench top</td>
</tr>
<tr>
<td>AUTESTER ST DRY PV-B 23</td>
<td>4001731</td>
<td>YES</td>
<td>23</td>
<td>121 and 134</td>
<td>1 and 2</td>
<td>2300</td>
<td>Microprocessor</td>
<td>Purged vacuum</td>
<td>Horizontal bench top</td>
</tr>
<tr>
<td>AUTESTER ST DRY PV-II 25</td>
<td>4002415</td>
<td>YES</td>
<td>25</td>
<td>105 to 134</td>
<td>0.21 to 2</td>
<td>2510</td>
<td>Microprocessor</td>
<td>Purged vacuum</td>
<td>Horizontal bench top</td>
</tr>
<tr>
<td>AUTESTER ST DRY PV-II 50</td>
<td>4002515</td>
<td>YES</td>
<td>50</td>
<td>105 to 134</td>
<td>0.21 to 2</td>
<td>3600</td>
<td>Microprocessor</td>
<td>Purged vacuum</td>
<td>Vertical</td>
</tr>
<tr>
<td>AUTESTER ST DRY PV-II 80</td>
<td>4002425</td>
<td>YES</td>
<td>80</td>
<td>105 to 134</td>
<td>0.21 to 2</td>
<td>3600</td>
<td>Microprocessor</td>
<td>Purged vacuum</td>
<td>Vertical</td>
</tr>
<tr>
<td>AUTESTER ST DRY PV-II 150</td>
<td>4002426</td>
<td>YES</td>
<td>150</td>
<td>105 to 134</td>
<td>0.21 to 2</td>
<td>7500</td>
<td>Microprocessor</td>
<td>Purged vacuum</td>
<td>Vertical</td>
</tr>
</tbody>
</table>

Quick Overview

Three different control systems:

1. Control by pressure with atmospheric purge:
   - MICRO 8
   - MED 12
   - MED 20

2. 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)

3. 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)
   - AUTESTER ST DRY PV-II 25 (mod. horizontal)
   - AUTESTER ST DRY PV-II 50 (mod. vertical)
   - AUTESTER ST DRY PV-II 80 (mod. vertical)

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)
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.

Autoclave for sterilization “MICRO 8”

DESKTOP MODEL

CONTROL PANEL

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’.

MODEL

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity litres</th>
<th>Ø (usable) cm</th>
<th>Height (exterior) cm</th>
<th>Height/Width/Depth (cm)</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>4001745</td>
<td>8</td>
<td>24</td>
<td>15</td>
<td>40</td>
<td>1000</td>
<td>13</td>
</tr>
</tbody>
</table>

It comes complete with a stainless steel wire basket of Ø 22x14cm high. Part no. 1004771.
**Autoclave for sterilization “MED 12”**

**DESKTOP MODEL**

Features: see page 57

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity litres</th>
<th>Ø (usable) cm</th>
<th>Height (usable) cm</th>
<th>Height/Width/Depth (exterior) cm</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>4001756</td>
<td>12</td>
<td>24</td>
<td>26</td>
<td>46</td>
<td>38</td>
<td>18</td>
</tr>
</tbody>
</table>

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

**Autoclave for sterilization “MED 20”**

**VERTICAL STAND MODEL.**

**CONFORMS TO APPARATUS PRESSURE REGULATION DIRECTIVES.**

Features: see page 57

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity litres</th>
<th>Ø (usable) cm</th>
<th>Height (usable) cm</th>
<th>Height/Width/Depth (exterior) cm</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>4001757</td>
<td>20</td>
<td>24</td>
<td>41</td>
<td>70</td>
<td>38</td>
<td>41</td>
</tr>
</tbody>
</table>

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.

SAFEY:
- 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.

FEATURES
- External case made from stainless steel.
- INCOLOY stainless steel heater elements, hard wearing, resistant to corrosion and high temperatures.
- Sterilization chamber and door made from stainless steel.
- Automatic purge to atmosphere.
- Lid, 6 point closure.

CONTROL PANEL

1. Pressure gauge.
2. Illuminated alarm indicator.
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

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity (usables cm)</th>
<th>Depth x Width x Height (exterior cm)</th>
<th>Power (W)</th>
<th>Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4001725</td>
<td>50</td>
<td>70 x 117 x 62</td>
<td>3000</td>
<td>75</td>
</tr>
<tr>
<td>4002136</td>
<td>80</td>
<td>40 x 107 x 58</td>
<td>3600</td>
<td>100</td>
</tr>
</tbody>
</table>

Does not include baskets and drums, order separately.

ACCESSORIES:
- AISI 304 Stainless steel wire baskets and drums.
- Pt100 second sensor only temperature reader (see page 62).

OPTIONS:
- That needs to be factory installed:

BACK VIEW:

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

An economic alternative, semi-automatic
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
EN 61010-1 SAFETY FOR EQUIPMENT FOR LABORATORY USE
EN 61010-2-040 SAFETY FOR STERILIZER EQUIPMENT FOR LABORATORY USE
EN 61326 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.
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 if over pressure.
Safety Lid: insulated lid protection.

CONTROL PANEL
1. LCD parameter indicator.
2. MONO single button control multi-function 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
8. 2nd Temperature sensor connection.
10. RS232 connector.
11. Mains input.
12. External water supply.
15. Air in filter valve.
17. Safety thermostat.
18. Empty tank valve.
19. Drain tank valve.
20. RS232 connector.
21. 2nd Temperature sensor connection.
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. Eeprom
2. RTC Fault
3. Sensor Precision
4. Heater Probe
5. Chamber Probe
6. Over Pressure
7. Vacuum
8. Pressure
9. Boiler Temperature
10. Temperature Low Fault
11. Input Error
12. Sterilization
13. Level 1
14. Level 2
15. Door
16. Printer No Paper
17. Paper Jam
18. Electrical Fault

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

<table>
<thead>
<tr>
<th>Programme</th>
<th>Description</th>
<th>Temperature</th>
<th>Time Sterilization</th>
<th>Time Dry</th>
<th>Time Purge</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Free</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>Unwrapped instruments</td>
<td>134 °C</td>
<td>4 min</td>
<td>15 min</td>
<td>2 (1)</td>
</tr>
<tr>
<td>2</td>
<td>Wrapped instruments</td>
<td>134 °C</td>
<td>12 min</td>
<td>30 min</td>
<td>3 (2)</td>
</tr>
<tr>
<td>3</td>
<td>CJD</td>
<td>134 °C</td>
<td>20 min</td>
<td>20 min</td>
<td>3 (2)</td>
</tr>
<tr>
<td>4</td>
<td>Delicate unwrapped</td>
<td>121 °C</td>
<td>15 min</td>
<td>15 min</td>
<td>2 (1)</td>
</tr>
<tr>
<td>5</td>
<td>Delicate wrapped</td>
<td>121 °C</td>
<td>30 min</td>
<td>30 min</td>
<td>3 (2)</td>
</tr>
<tr>
<td>6</td>
<td>Disinfecting</td>
<td>105 °C</td>
<td>25 min</td>
<td>15 min</td>
<td>1 (3)</td>
</tr>
<tr>
<td>7</td>
<td>Liquids</td>
<td>121 °C</td>
<td>30 min</td>
<td>-</td>
<td>1 (3)</td>
</tr>
<tr>
<td>8</td>
<td>Solids</td>
<td>121 °C</td>
<td>15 min</td>
<td>30 min</td>
<td>1 (3)</td>
</tr>
<tr>
<td>9</td>
<td>Solids</td>
<td>134 °C</td>
<td>4 min</td>
<td>30 min</td>
<td>1 (3)</td>
</tr>
</tbody>
</table>

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

MODELS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Dry</th>
<th>Capacity (litres)</th>
<th>Ø / Height (exterior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Temp. °C</th>
<th>Water Reservoir Hi/lo capacity</th>
<th>Basket size</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTESTER ST DRY PV II 50</td>
<td>4002515</td>
<td>Yes</td>
<td>50</td>
<td>30</td>
<td>63</td>
<td>117 48 62</td>
<td>105 to 134</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>AUTESTER ST DRY PV II 80</td>
<td>4002425</td>
<td>Yes</td>
<td>80</td>
<td>40</td>
<td>60</td>
<td>107 58 72</td>
<td>105 to 134</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>AUTESTER ST DRY PV II 150*</td>
<td>4002426</td>
<td>Yes</td>
<td>150</td>
<td>50</td>
<td>70</td>
<td>118 80 95</td>
<td>105 to 134</td>
<td>20</td>
<td>3</td>
</tr>
</tbody>
</table>

Comes without baskets and drums.

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

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 38 and 26 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 Ø 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).
**ACCESSORIES FOR VERTICAL AUTOCLAVES**

### AISI 304 stainless steel wire baskets.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Ø (cm)</th>
<th>Height (cm)</th>
<th>Suitable for autoclaves Part No.</th>
<th>Number of baskets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1004771</td>
<td>22</td>
<td>14</td>
<td>4001745</td>
<td>1</td>
</tr>
<tr>
<td>1004772</td>
<td>22</td>
<td>24</td>
<td>4001775</td>
<td>1</td>
</tr>
<tr>
<td>1004771</td>
<td>22</td>
<td>14</td>
<td>4001757</td>
<td></td>
</tr>
<tr>
<td>1004772</td>
<td>22</td>
<td>24</td>
<td>4001757</td>
<td></td>
</tr>
<tr>
<td>1000495</td>
<td>25,5</td>
<td>20</td>
<td>4001725 - 4002515</td>
<td>3</td>
</tr>
<tr>
<td>1000496</td>
<td>36</td>
<td>28</td>
<td>4002136 - 4002425</td>
<td>2</td>
</tr>
<tr>
<td>1000780</td>
<td>44,5</td>
<td>22</td>
<td>4002426</td>
<td>3</td>
</tr>
</tbody>
</table>

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.

Part 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.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Ø (cm)</th>
<th>Height (cm)</th>
<th>Suitable for autoclaves Part No.</th>
<th>Capacity Drums</th>
</tr>
</thead>
<tbody>
<tr>
<td>1002418</td>
<td>25</td>
<td>18</td>
<td>4001725 - 4002515</td>
<td>3</td>
</tr>
<tr>
<td>1002419</td>
<td>35</td>
<td>27</td>
<td>4002136 - 4002425</td>
<td>2</td>
</tr>
<tr>
<td>1002420</td>
<td>28</td>
<td>18</td>
<td>Not suitable for our autoclaves.</td>
<td></td>
</tr>
</tbody>
</table>

### 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 through 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.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity Distillation litre/Hour</th>
<th>Conductivity µS/cm</th>
<th>Ø (cm)</th>
<th>Height (cm)</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>4001729</td>
<td>1,5</td>
<td>5</td>
<td>29</td>
<td>39</td>
<td>750</td>
<td>3.5</td>
</tr>
</tbody>
</table>

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
2. RTC FAULT
3. SENSOR PRECISION
4. HEATER PROBE
5. CHAMBER PROBE
6. PRESSURE
7. VACUUM
8. FAULTS
9. BOILER TEMPERATURE

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

<table>
<thead>
<tr>
<th>No.</th>
<th>Programme</th>
<th>Description</th>
<th>Temperature</th>
<th>Sterilization</th>
<th>Time</th>
<th>Time</th>
<th>Purge</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Free</td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td>15</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>Unwrapped</td>
<td>134 °C</td>
<td>4 min</td>
<td>15 min</td>
<td>2</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Wrapped</td>
<td>134 °C</td>
<td>12 min</td>
<td>30 min</td>
<td>3</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>CJD</td>
<td>134 °C</td>
<td>20 min</td>
<td>20 min</td>
<td>3</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Delicate unwrapped</td>
<td>121 °C</td>
<td>15 min</td>
<td>15 min</td>
<td>2</td>
<td>(1)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Delicate wrapped</td>
<td>121 °C</td>
<td>30 min</td>
<td>30 min</td>
<td>3</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Disinfecting</td>
<td>105 °C</td>
<td>25 min</td>
<td>15 min</td>
<td>1</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Liquids</td>
<td>121 °C</td>
<td>30 min</td>
<td>-</td>
<td>1</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Solids</td>
<td>121 °C</td>
<td>15 min</td>
<td>30 min</td>
<td>1</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Solids</td>
<td>134 °C</td>
<td>4 min</td>
<td>30 min</td>
<td>1</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>(1)</td>
<td>Double Vacuum purge.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2)</td>
<td>Triple Vacuum purge.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3)</td>
<td>Atmospheric purge (No vacuum).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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
- Password
- Calibration
  - Temperature probe 1
  - Temperature probe 2
  - Water fill

**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**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity</th>
<th>Power</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTESTER ST DRY PV II 25</td>
<td>25</td>
<td>2510</td>
<td>52</td>
</tr>
</tbody>
</table>

**COMES COMPLETE WITH**
- Three trays, extractor forceps, and additional support for instruments and sterile wrapping bags.

**PARAMETERS AND PROGRAMS PRE INSTALLED IN THE AUTOCLAVE MICROPROCESSOR**

**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**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Height/Width/Depth</th>
<th>Power</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>4120131</td>
<td>16 10 DC 5V 3A 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Autoclaves**

**Autoclave for sterilization “Autester ST DRY PV” Class B**

**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:**

- EN 13060: SMALL GENERAL PURPOSE STEAM STERILIZERS.
- EN 61010-1: EQUIPMENT SAFE FOR LABORATORY USE.
- EN 61010-2-040: SAFETY FOR STERILIZER EQUIPMENT FOR LABORATORY USE.
- 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.**

**12 litres**

**18 litres**

**23 litres**

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 pressure, 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
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

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
10. Select wrapped or non wrapped.
11. Test.
13. “maintain hot” the chamber.
15. Pressure indicator (bar).
16. Temperature indicator (°C).
17. Time Indicator (min.).

CYCLES

<table>
<thead>
<tr>
<th>Sterilization Temperature</th>
<th>134 °C</th>
<th>134 °C</th>
<th>121 °C</th>
<th>121 °C</th>
<th>121 °C</th>
<th>134 °C</th>
<th>134 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wrapped</td>
<td>8 min.</td>
<td>4 min.</td>
<td>8 min.</td>
<td>4 min.</td>
<td>8 min.</td>
<td>2.1 bar</td>
<td>2.1 bar</td>
</tr>
<tr>
<td>Not Wrapped</td>
<td>12 min.</td>
<td>4 min.</td>
<td>30 min.</td>
<td>20 min.</td>
<td>12 min.</td>
<td>3.5 min.</td>
<td>10 min.</td>
</tr>
<tr>
<td>Dry time</td>
<td>10 min.</td>
<td>10 min.</td>
<td>10 min.</td>
<td>10 min.</td>
<td>15 min.</td>
<td>1 min.</td>
<td>-</td>
</tr>
</tbody>
</table>

MODEL

<table>
<thead>
<tr>
<th>AUTESTER ST DRY PV B 12</th>
<th>4001727</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity litres</td>
<td>12</td>
</tr>
<tr>
<td>Ø / depth cm</td>
<td>20 / 35</td>
</tr>
<tr>
<td>External Dimensions cm</td>
<td>39.2 / 48.7</td>
</tr>
<tr>
<td>Height cm</td>
<td>60</td>
</tr>
<tr>
<td>Power W</td>
<td>1800</td>
</tr>
<tr>
<td>Weight kg</td>
<td>42.2</td>
</tr>
</tbody>
</table>

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).

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

CONTROL PANEL

1. Start - Stop.
2. LCD screen.
3. Cancel - Menu.
4. Validation.

TEMPERATURE CONTROL AND AUTOMATIC MICROPROCESSOR CYCLE.

134 °C 134 °C 134 °C 121 °C Test Test
Wrapped Not Wrapped Not Wrapped Fast Wrapped Bowie Dick 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 Ø x depth cm External Dimensions cm Height 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

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).

Comes complete with:
spare joint, door adjustment key, support with three trays, extractor forceps, empty water filter and waste water out.
Bag sealer “S-400”

FEATURES
Metal epoxy covered case.
Stainless steel AISI 304 real support at the back.

CONTROL PANEL
Illuminated mains switch.
Lamp on when the thermostat has reached the pre-set working temperature.

MODEL

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Seal Width mm</th>
<th>Maximum seal length mm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>4100041</td>
<td>9</td>
<td>270</td>
<td>12 35 21</td>
<td>200</td>
<td>5.3</td>
</tr>
</tbody>
</table>

Bag sealer “Seal-1000”

FEATURES
Metal construction with stainless steel tray.
Pressure sealer unit with lateral lever with two bilateral cutting edges.
Constant sealing temperature (from 180 °C and 200 °C).

CONTROL PANEL
Illuminated start switch.
Indicator, optimum seal temperature.

MODEL

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Seal width mm</th>
<th>Maximum seal length mm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>4101712</td>
<td>10</td>
<td>260</td>
<td>30 36 43</td>
<td>400</td>
<td>6.5</td>
</tr>
</tbody>
</table>

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.

MODEL

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Height / Width / Depth (sealer) cm</th>
<th>Width / Depth (tray) cm</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>4100043</td>
<td>19 37 21</td>
<td>50 17</td>
<td>240</td>
<td>8.2</td>
</tr>
</tbody>
</table>

Sterilized paper “Pelicort” 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, “Ultrason-Digit” (see page 88).
Dry sterilizer “DRYTIME” poupinel oven (see page 132).