STERILIZATION AND BACTERIOLOGICAL OVENS - FURNACES

Poupinel sterilizers
Drying and sterilization ovens
Universal precision ovens
High temperature ovens
Vacuum ovens
Desiccators
Bacteriological incubators
Cooled low temperature incubator
Incubator chamber
CO₂ incubator
Cooled incubators
Electric muffle furnaces

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pages 29 to 31
Conforms to the international directives for safety and precision.

MODEL RANGE:

- Drying and sterilization.
- Universal: Programmed for cultures and sterilization.
- Vacuum drying.
- Bacteriological cultures.
- Low temperature- High Precision Peltier systems.
- CO₂ Incubators.
- Precise refrigerators and cooled incubators.
- More than 70 models with capacities from 19 to 720 litres.
- Controllable temperatures from –10 to 250 °C and 400 °C.
- Analogue or digital control through a microprocessor for temperature and time.
- Wide range of accessories for varying applications.
## OVENS, INCUBATORS AND FURNACES

### Summary table of the different models

<table>
<thead>
<tr>
<th>Model Range Sterilizers Per Pinel</th>
<th>Models</th>
<th>Control</th>
<th>Capacity</th>
<th>Safety</th>
<th>RS-232</th>
<th>USB</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 litres</td>
<td>19 litres</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>100 ... 250 °C</strong></td>
<td>DRYTIME</td>
<td>ANALOGUE</td>
<td>2000911</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>60 ... 250 °C</strong></td>
<td>DRYTERM</td>
<td>ANALOGUE</td>
<td>-</td>
<td>2000787</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass Drying</td>
<td></td>
<td></td>
<td>126 litres</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>40 ... 170 °C</strong></td>
<td>DRYGLASS</td>
<td>ANALOGUE</td>
<td>2000381</td>
<td></td>
<td></td>
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<tr>
<td>Convection Natural</td>
<td></td>
<td></td>
<td>10 litres</td>
<td>36 litres</td>
<td>52 litres</td>
<td>80 litres</td>
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<tr>
<td><strong>40 ... 250 °C</strong></td>
<td>CONTERM</td>
<td>ANALOGUE</td>
<td>2000208</td>
<td>2000209</td>
<td>2000200</td>
<td>2000210</td>
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<tr>
<td>Ambient+5 ... 250 °C</td>
<td>DIGITHEAT-TFT</td>
<td>TFT Touch screen</td>
<td>2001251</td>
<td>2001252</td>
<td>2001253</td>
<td>2001254</td>
</tr>
<tr>
<td><strong>FORCED AIR, FAN CONVECTION BENCH TOP</strong></td>
<td></td>
<td></td>
<td>33 litres</td>
<td>47 litres</td>
<td>76 litres</td>
<td>145 litres</td>
</tr>
<tr>
<td>Ambient+5 ... 250 °C</td>
<td>DIGITRONIC-TFT</td>
<td>TFT Touch screen</td>
<td>2005163</td>
<td>2005165</td>
<td>2005167</td>
<td>2005169</td>
</tr>
<tr>
<td><strong>FORCED AIR, FAN CONVECTION FLOOR STANDING</strong></td>
<td></td>
<td></td>
<td>216 litres</td>
<td>288 litres</td>
<td>400 litres</td>
<td>720 litres</td>
</tr>
<tr>
<td>Ambient+5 ... 250 °C</td>
<td>DRYBIG 230/400V III PHASES</td>
<td>DIGITAL</td>
<td>2002961</td>
<td>2002971</td>
<td>2003721</td>
<td>2003741</td>
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<td>Ambient+5 ... 250 °C</td>
<td>DRYBIG 230V I PHASE</td>
<td>DIGITAL</td>
<td>2002982</td>
<td>2002972</td>
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<td></td>
</tr>
<tr>
<td><strong>HIGH TEMPERATURE</strong></td>
<td></td>
<td></td>
<td>80 litres</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>60 ... 400 °C</strong></td>
<td>HIGHTEMP 230/400V III PHASES</td>
<td>DIGITAL</td>
<td>2001406</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vacuum Oven</td>
<td>3 litres</td>
<td>47 litres</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>35 ... 200 °C</strong></td>
<td>VACIOTEM T</td>
<td>DIGITAL</td>
<td>-</td>
<td>4001489</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>35 ... 200 °C</strong></td>
<td>VACIOTEM TV</td>
<td>DIGITAL</td>
<td>-</td>
<td>4001490</td>
<td></td>
<td></td>
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<tr>
<td>Ambient+5 ... 170 °C</td>
<td>VACUO-TEMP</td>
<td>DIGITAL</td>
<td>4000474</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desiccator</td>
<td>55 litres</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>INCUBATION CHAMBER</strong></td>
<td></td>
<td></td>
<td>110 litres</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Ambient+5 ... 57 °C</td>
<td>BOXCULT</td>
<td>DIGITAL</td>
<td>3000957</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>INCUBATORS BENCH TOP</strong></td>
<td></td>
<td></td>
<td>18 litres</td>
<td>36 litres</td>
<td>52 litres</td>
<td>80 litres</td>
</tr>
<tr>
<td>Ambient+5 ... 80 °C</td>
<td>INCUBAT</td>
<td>ANALOGUE</td>
<td>2000205</td>
<td>2000206</td>
<td>2001615</td>
<td>2002027</td>
</tr>
<tr>
<td><strong>INCUBATORS LARGE AND FLOOR STANDING</strong></td>
<td></td>
<td></td>
<td>288 litres</td>
<td>400 litres</td>
<td>720 litres</td>
<td></td>
</tr>
<tr>
<td>Ambient+5 ... 80 °C</td>
<td>INCUBIG-TFT</td>
<td>TFT Touch screen</td>
<td>2001256</td>
<td>2001257</td>
<td>2001258</td>
<td>2001259</td>
</tr>
<tr>
<td><strong>LOW TEMPERATURE CABINETS</strong></td>
<td></td>
<td></td>
<td>36 litres</td>
<td>80 litres</td>
<td>150 litres</td>
<td></td>
</tr>
<tr>
<td>5 ... 60 °C</td>
<td>PREBATEM-TFT</td>
<td>TFT Touch screen</td>
<td>2000963</td>
<td>2000964</td>
<td>2000965</td>
<td></td>
</tr>
<tr>
<td><strong>CO-INCUBATOR</strong></td>
<td></td>
<td></td>
<td>150 litres</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient+5 ... 50 °C</td>
<td>INCUBATOR CO-</td>
<td>DIGITAL</td>
<td>4002628</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Refrigeration</td>
<td>160 litres</td>
<td>319 litres</td>
<td>442 litres</td>
<td>600 litres</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+5 ... 65 °C</td>
<td>HOTCOLD-S</td>
<td>DIGITAL</td>
<td>2101618</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0 ... 50 °C</td>
<td>HOTCOLD A-B-C</td>
<td>DIGITAL</td>
<td>-</td>
<td>2101502</td>
<td>2101503</td>
<td>2101504</td>
</tr>
<tr>
<td>-10 ... 50 °C</td>
<td>HOTCOLD UB - UC</td>
<td>DIGITAL</td>
<td>-</td>
<td>2101505</td>
<td>2101506</td>
<td></td>
</tr>
<tr>
<td>5 ... 50 °C</td>
<td>HOTCOLD GL</td>
<td>DIGITAL</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2101507</td>
</tr>
<tr>
<td>Muffle Furnace</td>
<td>3 litres</td>
<td>3.6 litres</td>
<td>8 litres</td>
<td>9 litres</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to ... 1150 °C</td>
<td>SELECT-HORN-TFT</td>
<td>TFT Touch screen</td>
<td>-</td>
<td>2000366</td>
<td></td>
<td>2000367</td>
</tr>
<tr>
<td>Up to ... 1100 °C</td>
<td>R</td>
<td>TFT Touch screen</td>
<td>2000366</td>
<td>-</td>
<td>2000369</td>
<td>-</td>
</tr>
</tbody>
</table>

µ: with microprocessor.
Poupinel dry heat sterilizer “Drytime”

ADJUSTABLE TEMPERATURES FROM 100 °C UP TO 250 °C.
STABILITY: ±6 °C.

APPLICATIONS
For quick surgical sterilization of diverse instruments surgical odontological, etc.

FEATURES
Heating by shielded elements in the base which provide a rapid temperature rise.
Flap door.
Inner chamber in AISI 304 stainless steel.
Removable tank with extraction clamps.
Epoxy-coated outer casing.

SAFETY
Over temperature cut out incorporated. EN.61010 Standard.

CONTROL PANEL
Mains switch.
Mains indicator lamp.
Hydraulic thermostat for temperature control.
Timer 0 to 120 min. with automatic off.
Analogue temperature reading thermometer.

MODEL
<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000911</td>
<td>2.5</td>
<td>5 30 16</td>
<td>17 40 32</td>
<td>430</td>
<td>8</td>
</tr>
</tbody>
</table>

Poupinel dry heat sterilizer “Dryterm”

ADJUSTABLE TEMPERATURES FROM 60 °C UP TO 250 °C.
STABILITY: ±10 °C.

APPLICATIONS
For surgical sterilization of diverse instruments surgical odontological, etc.

FEATURES
Heating by shielded elements in the base that provides a rapid rise in temperature.
Flap door.
Inner chamber made of AISI 304 stainless steel, complete with a heater cover, three shelf runners and two perforated shelves 10 mm high.
Epoxy-coated outer casing.

SAFETY
Over temperature cut out incorporated. EN.61010 Standard.

CONTROL PANEL
Hydraulic thermostat temperature control.
Locking device for thermostat knob.
Timer 0 to 120 min. with automatic switch off.
Heater “ON” indicator.
Analogue temperature reading thermometer.

MODEL
<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000787</td>
<td>19</td>
<td>25 32 23</td>
<td>37 54 34</td>
<td>770</td>
<td>19</td>
</tr>
</tbody>
</table>
Glass drying oven “Dryglass”
FAN ASSISTED AIR CIRCULATION.
ADJUSTABLE TEMPERATURE FROM 40 °C TO 170 °C.

FEATURES
Hydraulic thermostat for temperature control.
Air circulation by turbo fan.
Inner chamber made of AISI 304 stainless steel with shelf runners.
Removable tempered glass sliding doors.
Ventilation port for steam.
Epoxy coated external case.

STANDARD EQUIPMENT
2 shelves and 4 shelf guides.

CONTROL PANEL
Dual heating power selector switch.
Mains indicator lamp.
Hydraulic thermostat for temperature control.
Locking system of thermostat knob.
Heater “ON” operation indicator lamp.
Analogue thermometer.
Adjustable over temperature safety thermostat, that cuts off the power if the control thermostat fails, manual reset with “on” indicator lamp.

MODEL

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity (litres)</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Shelf Positions</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000381</td>
<td>126</td>
<td>45 70 40</td>
<td>66 94 54</td>
<td>8</td>
<td>3000</td>
<td>65</td>
</tr>
</tbody>
</table>

SAFETY:
EN 61012 STANDARD OVER TEMPERATURE SAFETY CUT OUT FITTED.
DIN 12880. STANDARD (CLASS 2 AND 3.1) ADJUSTABLE SAFETY THERMOSTAT FITTED.

ACCESSORIES
Accessories must be factory installed.

SPARES
Part No.
2000081 Shelf guides x 2.
2000091 Shelf.
Each shelf requires 2 guides.

Tel: 1-201-599-1400 • Fax: 1-201-599-1406 • mail@globescientific.com • www.globescientific.com
OVENS AND INCUBATORS PREMIER RANGE

MODELS:
- NATURAL AIR CONVECTION, DRYING AND STERILIZATION.
- FAN ASSISTED CIRCULATION, UNIVERSAL APPLICATIONS.
- NATURAL AIR CONVECTION, BACTERIOLOGY AND INCUBATION.

CONTROL: ANALOGUE OR DIGITAL MICROPROCESSOR CONTROL OF TEMPERATURE AND TIME, MODEL DEPENDENT.

COMPLIES WITH THE STANDARDS: DIN 50011 - DIN 58945. REQUIRED FOR HEATING, STABILITY AND HOMOGENEITY.

SAFETY:
STANDARD EN.61010. INCORPORATED FIXED OVER TEMPERATURE DEVICE.
STANDARD DIN 12880. (CLASS 2 AND 3.1) SAFETY THERMOSTAT CONTROLLER FITTED.

COMMON FEATURES

Construction.
1. External case treated with a corrosive resistant epoxy coating.
2. Internal part: Easy to clean AISI 304 stainless steel double chamber, self adjusting door seal and adjustable shelves and guides.
3. Control panel: independent insulated control panel to facilitate all types of instruments, controls and regulators.
4. Adjustable air inlet.
5. Flexible floating door seal, self adjusting that maintains the best possible seal.

Technical Properties.
6. Excellent thermal qualities of the insulation has the optimum performance according to heater capacity and power consumption, with minimal external temperature loss.
7. Independent heating chamber for the heating elements to obtain an even heat distribution and rapid temperature equilibrium and stabilization.
8. Fan assisted convection models have a turbo fan.
9. All incubators for bacteriology and cell culture have a second inner door of tempered glass.

Technology from J. P. Selecta:
8. Adjustable guide and shelf positions.
9. Double seal around the chamber to provide a gentle but effective seal.
10. Floating spring door that adjusts the pressure and absorbs the thermal expansion.
11. Adjustable door pressure system closure.

Internal tempered glass door.

NOTE:
For all models, the values for stability and homogeneity shown are based on temperature conditions with the ventilation closed.
The optimum homogenization of temperature within the chamber is based on a reasonable load that does not surpass more than 70% of the volume of the chamber. The graphic results shown for temperature for each model are based on the above criteria.
CONTROL PANELS

Models with Analogue control.
1. Main switch.
3. Temperature control thermostat.
4. Heating “ON” indicator lamp.
5. Analogue thermometer temperature indicator.
6. Vacant positions for additional accessories.
7. Controllable safety thermostat that disconnects power to the heater in case of a fault in the main thermostat, manual reset (Directive DIN12880.2 class 2 and 3.1) and function signal lamp.

Models with 4.3 inches TFT touch screen.
1. Main switch.
2. TFT touch screen:
   - Visual audible alarm.
   - Clock calendar.
   - Single or cyclic On / Off programming.
   - Up to 10 work programs.
   - Up to 6 segments per program.
   - Stability time in each segment (from 1 min to 99h).
   - Alarms and events storage.
   - Probe error detection.
   - Self Diagnostics.
   - Ramps between segments.
   - Door open alarm.
   - Network failure detection and saving.
   - Over temperature and low temperature alarms and memorization (date, start time, end time and temperature).
   - Safety thermostat (TS) by software.
   - Mechanic safety thermostat (TS).
   - PC software.
   - User manual on screen.
   - Temperature control auto-tuning.
   - Configurable parameters: Date / time, temperature correction, data collection interval, language (English, Spanish and French), °C / °F selection, over temperature and low temperature limit.
3. RS-232 output.
4. USB output.
5. Security thermostat.
6. Ethernet output para for LAN connection.

MODEL SUMMARY TABLE

<table>
<thead>
<tr>
<th>Models</th>
<th>CONTERM</th>
<th>DIGITHEAT</th>
<th>DIGITRONIC</th>
<th>INCUBAT</th>
<th>INCUDIGIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE</td>
<td>Drying Oven</td>
<td>Drying Oven</td>
<td>Universal</td>
<td>Bacteriological Incubator</td>
<td>Bacteriological Incubator</td>
</tr>
<tr>
<td>CONTROL</td>
<td>Temperature</td>
<td>Temperature + time</td>
<td>Temperature + time</td>
<td>Temperature</td>
<td>Temperature + time</td>
</tr>
<tr>
<td>DISPLAY</td>
<td>Analogue</td>
<td>Digital</td>
<td>Digital</td>
<td>Analogue</td>
<td>Digital</td>
</tr>
<tr>
<td>AIR</td>
<td>Convection</td>
<td>Convection</td>
<td>Fan assisted</td>
<td>Convection</td>
<td>Convection</td>
</tr>
<tr>
<td>CIRCULATION</td>
<td>natural</td>
<td>natural</td>
<td>natural</td>
<td>natural</td>
<td>natural</td>
</tr>
</tbody>
</table>

ACCESSORIES

Part No. 2000002 Timer switch 0-120 minutes.
Suitable for CONTERM.

Part No. 2000003 Timer switch 0-12 hours.
Suitable for CONTERM and INCUBAT.

Part No. 2000009 24 hour programmer with continuous on/off cycling up to every 15 minutes.
Suitable for CONTERM and INCUBAT.

Part No. 2000016 Digital printer for time and temperature with numerical printout on continuous paper roll, with print intervals from 1 minute to 99 hours.
Suitable for DIGITHEAT, DIGITRONIC and INCUDIGIT.

Optional communication modules
Part No. 2101623 Module for Wifi network.
Part No. 2101624 Module for Bluetooth.
Part No. 2101625 Module RF.
Part No. 2101626 RS-232 to RS-485 converter.
Suitable for DIGITHEAT, DIGITRONIC and INCUDIGIT.
DRYING AND STERILIZATION OVENS

Drying and sterilization ovens “Conterm”

NATURAL CONVECTION.
TEMPERATURE THERMOSTAT CONTROL WITH ANALOGUE THERMOMETER.
FOR ADJUSTABLE TEMPERATURES FROM 40 °C UP TO 250 °C.
STABILITY: ±0.3 °C UP TO 150 °C. HOMOGENEITY: ±3.25 °C UP TO 150 °C.

SAFETY:
STANDARD EN.61010. INCORPORATED FIXED OVER TEMPERATURE DEVICE.
STANDARD DIN 12880. (CLASS 2 AND 3.1) SAFETY THERMOSTAT CONTROLLER FITTED.

FEATURES, CONTROL PANEL, SAFETY, STANDARD AND ACCESSORIES (see pages 139 and 140).

STANDARD EQUIPMENT
2 shelves and 4 shelf guides.

MODELS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity litres</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Shelf Positions</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000208</td>
<td>19</td>
<td>30 25 25</td>
<td>50 60 44</td>
<td>5</td>
<td>640</td>
<td>27</td>
</tr>
<tr>
<td>2000209</td>
<td>36</td>
<td>40 30 30</td>
<td>60 65 49</td>
<td>7</td>
<td>950</td>
<td>35</td>
</tr>
<tr>
<td>2000210</td>
<td>52</td>
<td>33 47 33</td>
<td>53 82 52</td>
<td>5</td>
<td>1075</td>
<td>44</td>
</tr>
<tr>
<td>2000201</td>
<td>80</td>
<td>50 40 40</td>
<td>70 74 59</td>
<td>8</td>
<td>1230</td>
<td>54</td>
</tr>
</tbody>
</table>

ACCESSORIES
Accessories must be installed in the factory.

Part No. 2000002 Timer switch 0-120 minutes.
2000003 Timer switch 0-12 hours.
2000009 24 hour programmer with continuous on/off cycling up to every 15 minutes.

SPARES
Shelves and guides.

<table>
<thead>
<tr>
<th>Oven Part No.</th>
<th>Guides set (2 units)</th>
<th>Shelves</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000208</td>
<td>2000011 2000012</td>
<td>2000012</td>
</tr>
<tr>
<td>2000009</td>
<td>2000013 2000015</td>
<td>2000013</td>
</tr>
<tr>
<td>2000010</td>
<td>2000022 2000024</td>
<td>2000023</td>
</tr>
<tr>
<td>2000011</td>
<td>2000025</td>
<td>2000025</td>
</tr>
</tbody>
</table>

Each shelf requires two guides (one set).
Drying and sterilization ovens “Digitheat-TFT”

NATURAL CONVECTION.
MICROPROCESSOR CONTROL WITH TFT TOUCH SCREEN.
ADJUSTABLE TEMPERATURE FROM AMBIENT +5 °C UP TO 250 °C.
STABILITY: ±0.3 °C, UP TO 150 °C. HOMOGENEITY: ±3.25 °C, UP TO 150 °C.
SET ERROR: ±2% OF THE WORKING TEMPERATURE. RESOLUTION: 1 °C.

SAFETY:
STANDARD EN.61010. INCORPORATED FIXED OVER TEMPERATURE DEVICE.
STANDARD DIN 12880. (CLASS 2 AND 3.1) CONTROLLABLE SAFETY THERMOSTAT FITTED.

Reaches working temperature with minimum delay

FEATURES, CONTROL PANEL, SAFETY, STANDARD AND ACCESSORIES (see pages 139 and 140).

STANDARD EQUIPMENT
2 shelves and 4 shelf guides.

MODELS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity (litres)</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Shelf Positions</th>
<th>Power W</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001251</td>
<td>19</td>
<td>30 25 25</td>
<td>50 60 44</td>
<td>5</td>
<td>600</td>
<td>24</td>
</tr>
<tr>
<td>2001252</td>
<td>36</td>
<td>40 30 30</td>
<td>60 65 49</td>
<td>7</td>
<td>900</td>
<td>35</td>
</tr>
<tr>
<td>2001253</td>
<td>52</td>
<td>33 47 33</td>
<td>53 82 52</td>
<td>5</td>
<td>1000</td>
<td>44</td>
</tr>
<tr>
<td>2001254</td>
<td>80</td>
<td>50 40 40</td>
<td>70 74 59</td>
<td>8</td>
<td>1200</td>
<td>59</td>
</tr>
<tr>
<td>2001255</td>
<td>150</td>
<td>50 60 50</td>
<td>70 95 68</td>
<td>8</td>
<td>2100</td>
<td>73</td>
</tr>
</tbody>
</table>

Performance graph of temperature and time.
A. Set at 250 °C: 60'.
B. Set at 180 °C: 54'.
C. Set at 100 °C: 48'.

ACCESSORIES
2000016 Digital printer for time and temperature with numerical printout on continuous paper roll, with print intervals from 1 minute to 99 hours.

SPARES
Shelves and guides.

<table>
<thead>
<tr>
<th>Oven Part No.</th>
<th>2001251</th>
<th>2001252</th>
<th>2001253</th>
<th>2001254</th>
<th>2001255</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guides set (2 units)</td>
<td>2000011</td>
<td>2000012</td>
<td>2000012</td>
<td>2000013</td>
<td>2000015</td>
</tr>
<tr>
<td>Shelves</td>
<td>2000021</td>
<td>2000022</td>
<td>2000024</td>
<td>2000023</td>
<td>2000025</td>
</tr>
</tbody>
</table>

Each shelf requires two guides (one set).
Universal precision ovens “Digitronic-TFT”

FAN ASSISTED CIRCULATION.
BACTERIOLOGICAL ASSAYS, DRYING PROCESSES AND STERILIZATION.
MICROPROCESSOR CONTROL WITH TFT TOUCH SCREEN.
ADJUSTABLE TEMPERATURES FROM AMBIENT +5 °C UP TO 250 °C.
STABILITY: ±0.3 °C, UP TO 100 °C. HOMOGENEITY: ±1 °C, UP TO 100 °C.
SET ERROR: ±2% OF THE WORKING TEMPERATURE. RESOLUTION: 1 °C.

SAFETY:
EN.61012 STANDARD OVER TEMPERATURE SAFETY CUT OUT FITTED.
ADJUSTABLE OVER TEMPERATURE SAFETY THERMOSTAT DIN 12880. (CLASS 2 AND 3.1) FITTED.

Multipurpose oven. Fast response and recuperation of temperature.

FEATURES
1. TFT touch screen.
2. Inner chamber made of AISI 304 stainless steel.
3. Pre-mixing chamber made of AISI 304 stainless steel.
4. Homogeneously distributed shielded heating elements with complete air circulation throughout.
5. Low external temperature due to excellent thermal insulation.
6. Flexible silicon door gasket around the entrance of the chamber.
7. Excellent door seal due to the floating inner door that adjusts and absorbs the thermal expansion.
8. Turbo fan made of AISI 304 stainless steel that makes to circulate the air at the working temperature.
9. Diagram showing the air flow from the pre-mixing chamber around the heating elements prior to entry to the oven’s chamber.
10. Independent insulated control box.
11. Epoxy coated outer case.
12. Ventilator with adjustable outlet (access at the back of the unit).
13. Adjustable height positions for guides and shelves.
15. Toughened double safety glass door for viewing the contents of the oven without having to open the door. (Model dependent).

CONTROL PANEL, SAFETY, STANDARD AND ACCESSORIES (see pages 139 and 140).

Temperature ramps graphic. Model Digitronic with solid metal door. Part No. 2005163 and 2005167.
(With toughened glass window door. Part No. 2005164 and 2005168).
MODEL DIGITRONIC TYPE POUPINEL, DOOR WITH TOUGHENED DOUBLE GLASS WINDOW

**STANDARD EQUIPMENT**
2 shelves and 4 shelf guides.

### MODELS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity litres</th>
<th>Door Type</th>
<th>Heating rate to 100 °C minutes</th>
<th>Recovery time* minutes</th>
<th>Complete air exchange per hour</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Shelf Positions</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005163</td>
<td>33</td>
<td>metal</td>
<td>15</td>
<td>7</td>
<td>16</td>
<td>40 28 30</td>
<td>60 65 55</td>
<td>7</td>
<td>1200</td>
<td>38</td>
</tr>
<tr>
<td>2005164</td>
<td>33</td>
<td>glass</td>
<td>15</td>
<td>7</td>
<td>16</td>
<td>40 28 30</td>
<td>60 65 55</td>
<td>7</td>
<td>1200</td>
<td>40</td>
</tr>
<tr>
<td>2005165</td>
<td>47</td>
<td>metal</td>
<td>16</td>
<td>7</td>
<td>16</td>
<td>33 45 32</td>
<td>53 81 58</td>
<td>5</td>
<td>1200</td>
<td>46</td>
</tr>
<tr>
<td>2005166</td>
<td>47</td>
<td>glass</td>
<td>16</td>
<td>7</td>
<td>16</td>
<td>33 45 32</td>
<td>53 81 58</td>
<td>5</td>
<td>1200</td>
<td>50</td>
</tr>
<tr>
<td>2005167</td>
<td>76</td>
<td>metal</td>
<td>17</td>
<td>9</td>
<td>14</td>
<td>50 38 40</td>
<td>70 75 65</td>
<td>8</td>
<td>1600</td>
<td>58</td>
</tr>
<tr>
<td>2005168</td>
<td>76</td>
<td>glass</td>
<td>17</td>
<td>9</td>
<td>14</td>
<td>50 38 40</td>
<td>70 75 65</td>
<td>8</td>
<td>1600</td>
<td>64</td>
</tr>
<tr>
<td>2005169</td>
<td>145</td>
<td>metal</td>
<td>17</td>
<td>10</td>
<td>12</td>
<td>50 58 50</td>
<td>70 95 72</td>
<td>8</td>
<td>2000</td>
<td>74</td>
</tr>
<tr>
<td>2005170</td>
<td>145</td>
<td>glass</td>
<td>17</td>
<td>10</td>
<td>12</td>
<td>50 58 50</td>
<td>70 95 72</td>
<td>8</td>
<td>2000</td>
<td>79</td>
</tr>
</tbody>
</table>

* Recovery time: the door was opened for 1 minute. After that, this is the time to recover the set temperature to 100 °C.

---

**ACCESSORIES**

Preparation of furnaces for drying moisture saturated samples. (Arids, muds, sands ...)
When adding turbine, the number of renewals of the air inside the furnace per hour multiplies by 10.
Must be factory installed
Part No. 2000095

---

**SPARES**

Shelves and guides.

<table>
<thead>
<tr>
<th>Oven Part No.</th>
<th>2005163</th>
<th>2005164</th>
<th>2005165</th>
<th>2005166</th>
<th>2005167</th>
<th>2005168</th>
<th>2005169</th>
<th>2005170</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guides (2) (Set)</td>
<td>2000012</td>
<td>2000033</td>
<td>2000013</td>
<td>2000015</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shelves</td>
<td>2000072</td>
<td>2000073</td>
<td>2000074</td>
<td>2000075</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Each shelf requires two guides i.e. one set.
Drying and sterilization ovens “Dry-Big”

FAN ASSISTED CIRCULATION.
DIGITAL CONTROL AND DISPLAY OF TEMPERATURE AND TIME
ADJUSTABLE TEMPERATURES FROM 40 °C UP TO 250 °C
STABILITY: ±0.4 °C, UP TO 100 °C, HOMOGENEITY: ±2 °C, UP TO 100 °C
SET ERROR: ±2.5% OF THE WORKING TEMPERATURE, RESOLUTION: 1 °C

SAFETY:
STANDARD EN.61010. FIXED OVER TEMPERATURE DEVICE FITTED.
STANDARD DIN 12880. (CLASS 2 AND 3.1) ADJUSTABLE SAFETY THERMOSTAT FITTED.

FEATURES
1. Microprocessor controlled with digital display of temperature and time, pre-programmable time start and run time once the set temperature has been achieved through the Pt100 temperature sensor.
2. Inner chamber made of AISI 304 stainless steel.
3. Pre mixing chamber made of AISI 304 stainless steel.
4. Shielded heating elements with complete air circulation, homogeneously distributed throughout.
5. Low external temperature due to excellent thermal insulation.
6. Ventilation fan to force the air to circulate in the oven.
7. Diagram showing the air flow from the premixing chamber round the heating elements to the oven chamber.
8. Independent insulated control box.
10. Ventilator with adjustable outlet of 120 Ø mm.
13. Flexible silicon door gasket around the entrance of the chamber.

CONTROL PANEL
1. Illuminated mains switch.
2. Temperature mode indicator.
3. Time mode indicator.
4. Display for temperature and time.
5. Operating, Status mode.
6. Delay time state indicator.
7. Push button temperature selector.
8. Push button time selector.
9. Push button "increase" value or parameter.
10. Push button "decrease" value or parameter.
11. Push button Stop/Start.
12. Set temperature.
13. Set run time: time period from 1 minute to 9 hours 59 minutes, or up to 99.9 hours, once the set temperature value has been reached.
14. Set wait time before starting the run, time period from: 1 to 24 hours.
15. RS-232 Interface output to a computer, for printer or USB adapter.
16. Adjustable safety thermostat that overrides the microprocessor in case of failure, with manual reset and indicator lamp.
STANDARD EQUIPMENT
2 Shelves.

MODELS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Voltage</th>
<th>Capacity (litres)</th>
<th>Heating rate to reach 100 °C, minutes</th>
<th>Recovery time* (minutes)</th>
<th>Air exchanges per hour</th>
<th>Height (interior) cm</th>
<th>Height (exterior) cm</th>
<th>Number of shelf positions</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002961</td>
<td>230 / 400 three phase</td>
<td>216</td>
<td>16</td>
<td>10</td>
<td>12</td>
<td>60 60 60</td>
<td>87 112 84</td>
<td>6</td>
<td>4000</td>
<td>150</td>
</tr>
<tr>
<td>2002962</td>
<td>230 single phase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002971</td>
<td>230 / 400 three phase</td>
<td>288</td>
<td>18</td>
<td>10</td>
<td>11</td>
<td>80 60 60</td>
<td>107 112 84</td>
<td>8</td>
<td>5000</td>
<td>161</td>
</tr>
<tr>
<td>2002972</td>
<td>230 single phase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DOUBLE DOOR CABINET

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Voltage</th>
<th>Capacity (litres)</th>
<th>Heating rate to reach 100 °C, minutes</th>
<th>Recovery time* (minutes)</th>
<th>Air exchanges per hour</th>
<th>Height (interior) cm</th>
<th>Height (exterior) cm</th>
<th>Number of shelf positions</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003721</td>
<td>230 / 400 three phase</td>
<td>400</td>
<td>18</td>
<td>13</td>
<td>6</td>
<td>100 80 50</td>
<td>128 132 74</td>
<td>10</td>
<td>5250</td>
<td>200</td>
</tr>
<tr>
<td>2003741</td>
<td>230 / 400 three phase</td>
<td>720</td>
<td>19</td>
<td>13</td>
<td>6</td>
<td>120 100 60</td>
<td>150 152 80</td>
<td>12</td>
<td>6000</td>
<td>264</td>
</tr>
</tbody>
</table>

Energy saving, three phase units are recommended.

Performance graph of temperature and time.
A. Set at 250 °C: 1 h 6'.
B. Set at 180 °C: 42'.
C. Set at 100 °C: 24'.

ACCESSORIES

4120131 USB adapter model.
Pen-Drive included (Memory board) for data storage.

2000016 Digital printer for time and temperature with numerical printout on continuous paper roll, with print intervals from 1 minute to 99 hours.

2000007 Digital programmable microprocessor. Capacity: 10 programs of 100 segments. Programmable timer: up to 99 hours 59' 59". Program repetition: up to 99 times. Programs can also be linked for up to 4 stages. RS-232 interface for data download to a printer or computer.

SPARES
Shelves.

<table>
<thead>
<tr>
<th>Oven Part No.</th>
<th>2002961/62</th>
<th>2002971/72</th>
<th>2003721</th>
<th>2003741</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shelves</td>
<td>2000062</td>
<td>2000063</td>
<td>2000064</td>
<td></td>
</tr>
</tbody>
</table>
**High temperature oven “Hightemp”**

**FEATURE**
- Digital electronic temperature control. Independent control box chamber thermally insulated.
- Shielded heating elements.
- Fan circulation motor with thermal cut out, motor operates independently from the heating elements, the motor can be activated during the cooling cycle.
- Inner chamber in AISI 304 heat resistant stainless steel with a high tolerance against corrosion and high temperatures.
- Fixed position shelf guides.
- Ventilation device with adjustable outlet.
- Epoxy-coated outer casing.

**SAFETY:**
- STANDARD DIN 12880. Adjustable over temperature thermostat fitted.

**STANDARD EQUIPMENT**
- 2 shelves made of AISI 304 stainless steel.

**CONTROL PANEL**
- Main switch.
- Mains indicator lamp.
- Heater switch.
- Heater operation indicator lamp.
- Digital electronic temperature control.
  - Electronic safety thermostat with a K type probe that cuts off power to the heating elements in case of a controller fault. (standard to DIN 12.880 class 2).

**MODEL**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Voltage</th>
<th>Capacity (litres)</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>N° of shelf positions</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001406</td>
<td>230 / 400 three phase</td>
<td>80</td>
<td>50</td>
<td>40</td>
<td>40</td>
<td>80</td>
<td>120</td>
</tr>
</tbody>
</table>

**ACCESSORIES**
- Accessories that must be installed in factory.
  - Part No.
    - 2000002 Timer switch 0-120 minutes.
    - 2000003 Timer switch 0-12 hours.
    - 2000009 24 hour programmer with continuous on/off cycling up to every 15 minutes.

**ACCESSORIES.** Shelves made of AISI 304 stainless steel. Part No. 2000071

**FEATURE**

Performance graph of temperature and time.

- Set at 400 °C: 1h 50'.
- Set at 200 °C: 1h.
Vacuum drying oven “Vaciotem-TV”

DIGITAL TEMPERATURE CONTROL. ELECTRONIC VACUUM PRESSURE DISPLAY AND TIMER.
CONTROLABLE TEMPERATURE FROM 35 °C TO 200 °C
STABILITY ±1 °C, UP TO 100 °C. HOMOGENEITY ±3 °C, UP TO 100 °C. SET ERROR ±2 °C. RESOLUTION 1 °C.

SAFETY:
OVER TEMPERATURE CUT OUT FITTED IN ACCORDANCE WITH THE EN.61010 STANDARD.
DIN 12880. STANDARD ADJUSTABLE SAFETY THERMOSTAT FITTED.

FEATURE
Digital electronic control of: temperature, vacuum pressure and pre-selected programmable timer.
Temperature sensor Pt100
Automatic air inlet at the end of the operation cycle.
Heating element placed evenly around the chamber.
Chamber made of AISI 304 stainless steel.
Trays made of anodised aluminium.
Door with hardened glass window, which sits on to a silicon gasket that absorbs any contractions and expansions that may occur.
Vacuum port with bleed valve.
Air valve at the front.
Vacuum pump connection at the back.
Epoxy covered outer case.
RS-232 Interface output for parameters to a computer, printer or USB adapter.

CONTROL PANEL
1. RS232 interface.
2. Air inlet.
3. Air inlet valve.
5. Vacuum pressure indicator lamp.
6. Air inlet valve indicator lamp, end of cycle.
7. Running indicator lamp.
8. Under vacuum indicator lamp.
9. Digital vacuum display in mbar.
10. Push button to select vacuum.
11. Push button to select electronic valve at the end of the cycle.
12. Push button to increase value.
13. Push button to decrease value.
14. Push button to STOP/START.
15. Indicator of mode temperature.
16. Indicator of mode time.
17. Indicator of operating.
18. Indicator of mode waiting time.
19. Digital display of temperature or time.
20. Push button to select temperature.
21. Push button to select time.
22. Push button to increase value.
23. Push button to decrease value.
24. Push button to STOP/START.
25. Mains switch.
26. Safety thermostat in operation.
27. Air inlet.
28. Pump power connection.
29. Vacuum connection.
30. Adjustable safety thermostat

BACK
27. Air inlet.
28. Pump power connection.
29. Vacuum connection.
30. Adjustable safety thermostat

MODEL

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Vacuum Max.</th>
<th>Capacity</th>
<th>Ø / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Shelves</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>4001490</td>
<td>10⁻² mm Hg</td>
<td>47</td>
<td>34 52</td>
<td>54 76 70</td>
<td>2</td>
<td>2000</td>
<td>73</td>
</tr>
</tbody>
</table>

Model 4001490

Note: To obtain the optimum homogeneity at the set temperature, the load should not surpass more than 70% of the volume of the chamber.

ACCESSORIES

4120131 USB adapter model.
Pen-Drive included (Memory board) for data storage.

SPARE PARTS

Shelves. (2)
Part No. 2000030

Accessories see page 150
**Vacuum oven “Vaciotem-T”**

**DIGITAL TEMPERATURE AND TIMER CONTROL.**
**CONTROLLABLE TEMPERATURE FROM 35 °C TO 200 °C.**
**STABILITY ±1 °C, UP TO 100 °C. HOMOGENEITY ±2 °C, UP TO 100 °C. SET ERROR ±1 °C. RESOLUTION 1 °C.**

**SAFETY:**
OVER TEMPERATURE CUT OUT FITTED IN ACCORDANCE WITH THE EN.61010 STANDARD.
DIN 12880. STANDARD ADJUSTABLE SAFETY THERMOSTAT FITTED.

**FEATURE**
Digital electronic control of temperature and pre-selected programmable timer.
Running time range: from 1 minute to 9hrs 59 min. or 99.9 hrs.
Pre-program start time, (wait time range): 1 hr to 24 hrs
Temperature sensor Pt100
Heating element placed evenly around the chamber.
Chamber made from AISI 304 stainless steel.
Trays made from anodised aluminium.
Door with hardened glass window, which sits on to a silicon gasket that absorbs any contractions and expansions that may occur.
Vacuum port with bleed valve
Air valve at the front
Vacuum pump connection at the back.
Epoxy covered outer case.
RS-232 Interface output of parameters for a computer, printer or USB adapter.

**CONTROL PANEL**
1. RS 232 connector.
2. Air inlet.
3. Air inlet valve.
4. Vacuum gauge.
15. Temperature mode indicator.
16. Time mode indicator.
17. Operation indicator.
18. Waiting time indicator.
19. Time and temperature digital display.
20. Push button to select temperature.
21. Push button to select time.
22. Push button to increase value.
23. Push button to reduce value.
24. Push button to STOP/START.
25. Mains switch.
26. Safety thermostat indicator lamp.
27. Vacuum pump control switch.

**BACK**
28. Vacuum pump power connection.
29. Vacuum connection.
30. Air inlet.
31. Adjustable safety thermostat.

**MODEL**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Vacuum Max.</th>
<th>Capacity / litres</th>
<th>Ø / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Shelves</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>4001489</td>
<td>10⁻² mm Hg</td>
<td>47</td>
<td>34 52</td>
<td>54 76 70</td>
<td>2</td>
<td>2000</td>
<td>73</td>
</tr>
</tbody>
</table>

Note: To obtain the optimum homogeneity at the set temperature, the load should not surpass more than 70 % of the volume of the chamber.

**ACCESSORIES**
4120131 USB adapter model.
Pen-Drive included (Memory board) for data storage.

**SPARE PARTS**
Shelves. (2)
Part No. 2000030

Accessories see page 150
Vacuum pump “VACUM-10 Pa”

ROTARY VEIN PUMP WITH ANTI RETURN VALVE PREVENTS OIL FLOW BACK, SUITABLE FOR GENERAL LABORATORY APPLICATIONS. OVER TEMPERATURE MOTOR PROTECTION CUT-OUT AND MAIN ON/OFF SWITCH. RECOMMENDED FOR THE “VA CIOTEM T AND TV” AND THE DESICCATOR “VACUO-TEMP”.

FEATURE
Heat resistant veins and internal joints
Aspiration inlet flange: 16 mm Ø.
High oil volume and forced lubrication.
Exhaust filter and ballast.

MODEL

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Pump rate m³/h</th>
<th>Vacuum limit mbar</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>r.p.m.</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>5900621</td>
<td>3.6</td>
<td>0.06</td>
<td>27 35 14</td>
<td>1400</td>
<td>180</td>
<td>11</td>
</tr>
</tbody>
</table>

Heated vacuum desiccator “Vacuo-Temp”

WITH TEMPERATURE THERMIC LIMITER.
TIME AND TEMPERATURE DIGITAL ELECTRONIC CONTROL.
ADJUSTABLE TEMPERATURE FROM AMBIENT +5 °C TO 170 °C.
STABILITY: ±1 °C. RESOLUTION: 1 °C.
TIME FROM 1’ TO 999’, OR CONTINUOUS.

FEATURES
AISI 304 stainless steel outer casing.
Polished aluminium alloy flat surface plate with an effective vacuum seal.
Tempered glass bell jar with silicon gasket seal.
Shielded heating element.
Pt 100 temperature probe.
Vacuum pump connection at the back of the unit.
Vacuum bleed valve.

CONTROL PANEL
Main switch.
Analogue vacuum gauge.
Digital time & temperature display.
Overheating alarm.
Visualized parameter indicator.
Push button for the visualized parameter.
Push button to increase the parameter.
Push button to decrease the parameter.
Button On-Off.

MODEL

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Vacuum Max</th>
<th>Usable volume litres</th>
<th>Ø heating plate cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>4000474</td>
<td>10⁻² mm Hg</td>
<td>3</td>
<td>23.5</td>
<td>17 28 34</td>
<td>540</td>
<td>9</td>
</tr>
</tbody>
</table>

Supplied complete with bell jar and silicon seal.

Desiccator for materials

WITH HYDROMETER CONTROL.

APPLICATIONS
Cabinet with protection against humidity and dust for anhydrous, biological and chemical preservation of samples.

FEATURE
Made of robust transparent 12mm thick methacrylate. The door has a silicon seal and magnetic catch.
Volume: 55 Litres.
Dimensions 50 cm high x 38 cm wide x 29 cm deep.
Supplied complete with three perforated shelves and a stainless steel AISI 304 tray to hold desiccating material.
Part No. 1001403

SPARES
Tempered glass bell 15 cm high and 23 cm Ø. Part No. 4000475
Silicon seal. Part No. 4000476
Bacteriological incubators “Incubat”

NATURAL CONVECTION.
TEMPERATURE THERMOSTAT CONTROL WITH ANALOGUE THERMOMETER.
ADJUSTABLE TEMPERATURES FROM AMBIENT +5 °C UP TO 80 °C.
STABILITY: ±0.1 °C, UP TO 37 °C. HOMOGENEITY: ±0.5 °C, UP TO 37 °C
INTERNAL GLASS DOOR.

FEATURES, CONTROL PANEL, STANDARD AND ACCESSORIES (see pages 139 and 140).

SAFETY:
OVER TEMPERATURE CUT OUT INCORPORATED ACCORDING TO THE EN.61010 STANDARD.
ADJUSTABLE SAFETY THERMOSTAT DIN 12880. FITTED.

Performance graph of temperature and time.
A. Set at 80 °C: 1 h 54'.
B. Set at 56 °C: 1 h 46'.
C. Set at 37 °C: 1 h 18'.

Horizontal model. Part No. 2001615

STANDARD EQUIPMENT
2 shelves and 4 shelf guides.

MODELS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity litres</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Shelves positions</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000205</td>
<td>19</td>
<td>30 25 25</td>
<td>51 57 49</td>
<td>5</td>
<td>165</td>
<td>26</td>
</tr>
<tr>
<td>2000206</td>
<td>36</td>
<td>40 30 30</td>
<td>60 62 54</td>
<td>7</td>
<td>245</td>
<td>36</td>
</tr>
<tr>
<td>2001615</td>
<td>52</td>
<td>33 47 33</td>
<td>53 79 57</td>
<td>5</td>
<td>275</td>
<td>46</td>
</tr>
<tr>
<td>2000207</td>
<td>80</td>
<td>50 40 40</td>
<td>70 72 64</td>
<td>8</td>
<td>315</td>
<td>54</td>
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<tr>
<td>2000994</td>
<td>150</td>
<td>50 60 50</td>
<td>70 92 74</td>
<td>8</td>
<td>535</td>
<td>78</td>
</tr>
</tbody>
</table>

SPARES
Shelves and guides.

<table>
<thead>
<tr>
<th>Oven Part No.</th>
<th>Set guides (2 units)</th>
<th>Shelves</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000205</td>
<td>2000011</td>
<td>2000021</td>
</tr>
<tr>
<td>2000206</td>
<td>2000012</td>
<td>2000022</td>
</tr>
<tr>
<td>2001615</td>
<td>2000012</td>
<td>2000024</td>
</tr>
<tr>
<td>2000207</td>
<td>2000013</td>
<td>2000023</td>
</tr>
<tr>
<td>2000994</td>
<td>2000015</td>
<td>2000025</td>
</tr>
</tbody>
</table>

Each shelve requires two guides (one set).

ACCESSORIES
Accessories must be factory installed.

Part No. 2000003 Timer switch 0-12 hours.

2000009 24 hour programmer with continuous on/off cycling up to every 15 minutes.
Digital bacteriological incubators “Incudigit-TFT”

NATURAL CONVECTION.
DIGITAL CONTROL AND DISPLAY OF TEMPERATURE AND TIME.
ADJUSTABLE TEMPERATURE FROM AMBIENT +5 °C UP TO 80 °C.
STABILITY: ±0.1 °C, UP TO 37 °C. HOMOGENEITY: ±0.5 °C, UP TO 37 °C.
SET ERROR: ±2% OF THE WORKING TEMPERATURE, RESOLUTION 0.1 °C
INTERNAL TEMPERED GLASS DOOR.
DOUBLE CHAMBER, MINIMUM RISK OF SAMPLE CONTAMINATION.
INSIDE WITHOUT OPENINGS AND WITH ROUNDED CORNERS. EASY TO CLEAN.

FEATURES, CONTROL PANEL, STANDARD AND ACCESSORIES (see pages 139 and 140).

SAFETY:
OVER TEMPERATURE CUT OUT INCORPORATED ACCORDING TO THE EN.61010 STANDARD.
ADJUSTABLE SAFETY THERMOSTAT DIN 12880. FITTED.

STANDARD EQUIPMENT
2 shelves and 4 shelf guides.

MODELS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity litres</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Shelves positions</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001256</td>
<td>19</td>
<td>30 25 25</td>
<td>51 57 49</td>
<td>5</td>
<td>150</td>
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<td>2001257</td>
<td>36</td>
<td>40 30 30</td>
<td>60 62 54</td>
<td>7</td>
<td>225</td>
<td>36</td>
</tr>
<tr>
<td>2001258</td>
<td>52</td>
<td>33 47 33</td>
<td>53 79 57</td>
<td>5</td>
<td>250</td>
<td>46</td>
</tr>
<tr>
<td>2001259</td>
<td>80</td>
<td>50 40 40</td>
<td>70 72 64</td>
<td>8</td>
<td>300</td>
<td>54</td>
</tr>
<tr>
<td>2001260</td>
<td>150</td>
<td>50 60 50</td>
<td>70 92 74</td>
<td>8</td>
<td>525</td>
<td>75</td>
</tr>
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</table>

SPARES
Shelves and guides.

<table>
<thead>
<tr>
<th>Oven Part No.</th>
<th>2001256</th>
<th>2001257</th>
<th>2001258</th>
<th>2001259</th>
<th>2001260</th>
</tr>
</thead>
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<tr>
<td>Guides (2) (Set)</td>
<td>2000011</td>
<td>2000012</td>
<td>2000012</td>
<td>2000013</td>
<td>2000015</td>
</tr>
<tr>
<td>Shelves</td>
<td>2000021</td>
<td>2000022</td>
<td>2000024</td>
<td>2000023</td>
<td>2000025</td>
</tr>
</tbody>
</table>

Each self requires two guides i.e. one set.

Performance graph of temperature and time.
A. Set at 80 °C: 1 h 12'.
B. Set at 56 °C: 54'.
C. Set at 37 °C: 48'.

2000016 Digital printer for time and temperature with numerical printout on continuous paper roll, with print intervals from 1 minute to 99 hours.
Incubators for bacteriology and cell culture “Incubig-TFT”

NATURAL CONVECTION.
MICROPROCESSOR CONTROL AND DIGITAL DISPLAY OF TEMPERATURE AND TIME.
ADJUSTABLE TEMPERATURE FROM AMBIENT +5 °C TO 80 °C.
STABILITY: ±0.1 °C, UP TO 37 °C. HOMOGENEITY: ±0.5 °C, UP TO 37 °C.
SET ERROR: ±2% OF THE WORKING TEMPERATURE, RESOLUTION 0.1 °C
INTERNAL TEMPERED GLASS DOOR.

SAFETY:
STANDARD EN.61010 OVER TEMPERATURE CUT OUT FITTED.
STANDARD DIN 12880. ADJUSTABLE SAFETY THERMOSTAT FITTED.

Capacities up to 720 litres

FEATURE
Microprocessor control and 4.3 inches TFT touch screen display.
Large surface area heating elements.
Inner chamber made of AISI 304 stainless steel.
Double door, interior door of tempered glass that allows the user to see the contents of the chamber without opening the door.
Adjustable air vent.
Epoxy covered external case.

STANDARD EQUIPMENT
For Part No. 2000238, 2 shelves and 4 shelf guides.
For Part No. 2000239 and 2000240, 2 shelves.

Performance graph of temperature and time.
A. Set at 80 °C: 1 h 45'.
B. Set at 56 °C: 1 h 10'.
C. Set at 37 °C: 54'.

Note: To obtain the optimum homogeneity at the set temperature, the load should not surpass more than 70 % of the volume of the chamber.
MODELS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Type</th>
<th>Capacity (litres)</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Nº of shelf guides</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000238</td>
<td>1 door</td>
<td>288</td>
<td>80 60 60</td>
<td>97 91 76</td>
<td>8</td>
<td>570</td>
<td>87</td>
</tr>
<tr>
<td>2000239</td>
<td>2 door</td>
<td>400</td>
<td>100 80 50</td>
<td>130 114 75</td>
<td>10</td>
<td>1100</td>
<td>160</td>
</tr>
<tr>
<td>2000240</td>
<td>2 door</td>
<td>720</td>
<td>120 100 60</td>
<td>152 134 85</td>
<td>12</td>
<td>1600</td>
<td>225</td>
</tr>
</tbody>
</table>

ACCESORY

4120131 USB adapter model. Pen-Drive included (Memory board) for data storage.

2000016 Digital printer for time and temperature with numerical printout on continuous paper roll, with print intervals from 1 minute to 99 hours.

ACCESSORY

Accessories must be factory installed.

SPARES

Shelves and guides.

<table>
<thead>
<tr>
<th>Oven Part No.</th>
<th>2000238</th>
<th>2000239</th>
<th>2000240</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shelves</td>
<td>2002372</td>
<td>2000063</td>
<td>2000064</td>
</tr>
<tr>
<td>Guides (2) (Set)</td>
<td>2002371</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Each self requires two guides i.e. one set.

Incubator for Petri capsules

NATURAL CONVECTION.
MICROPROCESSOR REGULATION AND TEMPERATURE DIGITAL CONTROL.
FOR ADJUSTABLE TEMPERATURES FROM AMBIENT +5°C TO 60°C.
STABILITY: ±0,1°C TO 37°C. HOMOGENEITY: ±0,1°C TO 37°C. SETPOINT ERROR: ±0,1°C. RESOLUTION: 0,1°C.

APPLICATIONS

Specially designed for bacteria and fungi cultures in Petri capsules at the same temperature of human body.

FEATURES

Culture surface 320 x 220 mm (Inner height: 20mm)
Culture visual monitoring.
Transparent cover.
Easy access to samples.
Approximate capacity: (single level) (mm)
15 Petri capsules of Ø55.
10 Petri capsules of Ø80.
7 Petri capsules of Ø90.
6 Petri capsules of Ø100.
3 Petri capsules of 120x120.
2 Petri capsules of Ø140.

MODEL

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Margin T°</th>
<th>Height / Width / Depth (Exterior) cm</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>4002629</td>
<td>Amb -5 to 60</td>
<td>7 45 25</td>
<td>2 32 22</td>
<td>300</td>
<td>3.5</td>
</tr>
</tbody>
</table>
Cooled low temperature incubator “Prebatem-TFT”

FORCED AIR FAN CIRCULATION.
MICROPROCESSOR CONTROLLED WITH DIGITAL DISPLAY
ADJUSTABLE TEMPERATURES FROM 5 °C UP TO 60 °C. RESOLUTION 0.1 °C
SEMICONDUCTOR HEATING AND COOLING SYSTEM.
QUIET-STABLE - FREE FROM VIBRATIONS - VERY ACCURATE - LOW POWER CONSUMPTION.
INNER TEMPERED GLASS DOOR.

SAFETY: CONFORMS TO THE DIN 50011 STANDARD FOR TEMPERATURE STABILITY AND HOMOGENEITY.
CONFORMS TO THE DIN 12880 STANDARD ADJUSTABLE SAFETY THERMOSTAT FITTED.

LEADING EDGE TECHNOLOGY, PELTIER EFFECT. NO COMPRESSOR.

APPLICATIONS
Biotechnology, Bacteriology, Plasma fractionation, Biology, Enzymatic test, Research, Serum studies, metrology, Botany, Phytopharmacy, Cosmetics, Water analysis and Agricultural research, feeding, new techniques for protein crystallization.

FEATURE
1. 4.3 inches TFT touch screen.
2. Inner chamber and elements made of AISI 304 stainless steel.
3. Premixing temperature chamber.
4. Semiconductor- static radiator for heating and cooling.
5. Excellent thermal insulation within the chamber.
6. Turbo fan to make the air circulate.
7. Diagram showing the homogeneous air flow from the premixing chamber of the semiconductor cooling / heating system.
8. Independent insulated control box.
10. Shelves of AISI 304 stainless steel.
11. Epoxy coated outer case.

PERFORMANCE

<table>
<thead>
<tr>
<th>Specification</th>
<th>at 10 °C</th>
<th>at 37 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>±0.5 °C</td>
<td>±0.1 °C</td>
</tr>
<tr>
<td>Homogeneity</td>
<td>±0.1 °C</td>
<td>±0.3 °C</td>
</tr>
<tr>
<td>Set error</td>
<td>±0.25 °C</td>
<td>±0.20 °C</td>
</tr>
</tbody>
</table>

CONTROL PANEL
1. Main switch.
2. TFT touch screen:
   Visual audible alarm.
   Clock calendar.
   Single or cyclic On / Off programming.
   Up to 10 work programs.
   Up to 6 segments per program.
   Stability time in each segment (from 1 min to 99h).
   Alarms and events storage.
   Probe error detection.
   Self Diagnostics.
   Ramps between segments.
   Door open alarm.
   Network failure detection and saving.
   Over temperature and low temperature alarms and memory (date, start time, end time and temperature).

Safety thermostat (TS) by software.
Mechanic safety thermostat (TS).
USB and RS -232 output.
PC software.
User manual on screen.
Configurable parameters: Date / time, temperature correction, data collection interval, language (English, Spanish and French), °C / °F selection, over temperature and low temperature limit.
3. RS-232 output.
4. USB output.
5. Security thermostat.
6. Ethernet output para for LAN connection.

Oven’s diagram seen from the front side.

Forced air passes through the heat exchanger chamber prior to entering the main cabinet chamber.

Cross section of the circulation of air maintaining the temperature in the cabinet below ambient by the use of an electronic heat exchanger rather than a compressor.
CONTROL PANEL
Main switch.
Mains indicator lamp.
Microprocessor control and digital temperature display.
Adjustable safety thermostat.

STANDARD EQUIPMENT
2 shelves and 4 shelf guides.

MODELS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity litres</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Shelf guides</th>
<th>Power consumption W/hr. at 5 °C</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000963</td>
<td>36</td>
<td>40 30 30</td>
<td>60 65 49</td>
<td>7</td>
<td>70</td>
<td>50</td>
<td>310</td>
</tr>
<tr>
<td>2000964</td>
<td>80</td>
<td>50 40 40</td>
<td>70 75 59</td>
<td>8</td>
<td>75</td>
<td>55</td>
<td>310</td>
</tr>
<tr>
<td>2000965</td>
<td>150</td>
<td>50 60 50</td>
<td>70 95 68</td>
<td>8</td>
<td>90</td>
<td>60</td>
<td>310</td>
</tr>
</tbody>
</table>

Performance graph of temperature and time.
A. Set at 50 °C: 40'.
B. Set at 0 °C: 48'.

Note: To obtain the optimum homogeneity at the set temperature, the load should not surpass more than 70% of the volume of the chamber.

ACCESSORIES
Accessories must be factory installed.

Digital printer for time and temperature with numerical printout on continuous paper roll, with print intervals from 1 minute to 99 hours.
Part No. 2000016

Optional communication modules
Part No. 2101623 Module for Wifi network.
Part No. 2101624 Module for Bluetooth.
Part No. 2101625 Module RF.
Part No. 2101626 RS-232 to RS-485 converter.

SPARES
Shelves and guides.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>2000963</th>
<th>2000964</th>
<th>2000965</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guides (2) (Set)</td>
<td>2000012</td>
<td>2000013</td>
<td>2000015</td>
</tr>
<tr>
<td>Shelves</td>
<td>2000022</td>
<td>2000023</td>
<td>2000025</td>
</tr>
</tbody>
</table>

Each self requires two guides i.e. one set.
Incubation chamber “Boxcult”

FEATURE
Made of transparent methacrylate that allows the user to see inside the incubator during operation. To facilitate the access to the working area the unit has a wide front door, and a removable base made of AISI 304 stainless steel. The fan convection circulation system ensures an even and rapid recovery of temperature. A 30 mm Ø port at the rear can be used to connect power to apparatus inside the chamber.

Supplied as accessories, the removable base allows the Boxcult to be mounted on the “Rotabit” reciprocal/orbital shaker. (described in the stirrer section.)

The metallic top of the chamber includes the heating elements, air circulation fan and temperature control.

CONTROL PANEL
Main switch.
Digital electronic temperature control.

MODEL

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity</th>
<th>Height / Width / Depth</th>
<th>Power</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>litres</td>
<td>(interior) cm</td>
<td></td>
<td>Kg</td>
</tr>
<tr>
<td>3000957</td>
<td>110</td>
<td>50 47 47</td>
<td>220</td>
<td>18</td>
</tr>
</tbody>
</table>

Supplied without bottom base, or stainless steel rack and shelves.

ACCESSORIES

Removable bottom base made of AISI 304 stainless steel. Part No. 3001172

Stainless steel rack with 4 shelves positions, each one separated by 9 cm. Comes complete with 2 removable shelves. Useful dim. 43 cm long and 41 cm wide. Part No. 1000973

For an easy handling, all control devices are outside the chamber enclosure.
CO₂ Incubators for anaerobic cell and tissue cultures “Incubator CO₂”

MICROPROCESSOR CONTROL WITH DIGITAL DISPLAY OF TEMPERATURE AND CO₂.

ADJUSTABLE TEMPERATURES FROM AMBIENT +5 °C TO 50 °C
STABILITY: ±0.2 °C, UP TO 37 °C. HOMOGENEITY: ±0.5 °C, UP TO 37 °C. RESOLUTION: 0.1 °C.
ALARM RANGE: FROM AMBIENT+5 °C TO 50 °C. RESOLUTION: 0.1 °C.
CO₂ RANGE: FROM 0 TO 20%. STABILITY: ±0.3%. RESOLUTION: 0.1%

SAFETY:
STANDARD DIN 12880. DOUBLE INDEPENDENT OVER TEMPERATURE SAFETY THERMOSTAT.
CO₂ DEVIATION FROM SET VALUE. OPEN DOOR INDICATOR, ELECTRICAL FAULT INDICATOR. LOW CO₂ PRESSURE.

FEATURE
External case of steel coated with epoxy with insulated chamber.
The chamber is made of stainless steel with removable shelf supports and easy clean system.
Two doors; one interior of tempered glass with silicon gasket and a heated external steel door with magnetic seal to prevent condensation on the glass door.
Smooth door action, to prevent jolts or vibrations disturbing the contents of the incubator.
The CO₂ input is by a metal tube of 6 mm Ø x 4 mm at the back of the unit.
RS-232 Interface output for a computer, printer or USB adapter.

CONTROL SYSTEM
Digital electronic control of temperature and CO₂, by a single multilevel control button and LCD screen, that controls all functions within the chamber.

HUMIDITY CONTROL
The humidity level within the chamber is at a constant 98% RH level, that is produced directly by water evaporation previously introduced at the bottom of the chamber.

CONTROL PANEL
1. Visual alarm indicator.
2. LCD display of all parameters.
4. Printer (Optional)
5. Main On switch.

MODEL

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity litres</th>
<th>Height/Width/Depth (exterior) cm</th>
<th>Height/Width/Depth (exterior) cm</th>
<th>Shelf guide positions</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>4002628</td>
<td>150</td>
<td>65 x 65 x 73</td>
<td>50 x 46</td>
<td>9</td>
<td>800</td>
<td>110</td>
</tr>
</tbody>
</table>

Comes with two shelves.

ADDITIONAL
Shelves stainless steel. Part No. 1001675

ACCESSORIES
USB adapter model.
Pen-Drive included (Memory board) for data storage.
Part No. 4120131

Printer: temperature, CO₂, time and status.
(Needs to be factory fitted.)
Part No. 4001676

Fyrite CO₂ analyser.
Monitor for checking the CO₂ % concentration.
The unit has a graduated scale of 0 to 20 %.
Reagent valid for 300 analysis. Should not be used with explosive gasses.
Part No. 4000632

Reagent flask 64 mL. Part No. 4000635

Tel: 1-201-599-1400 • Fax: 1-201-599-1406 • mail@globescientific.com • www.globescientific.com
PRECISE COOLED INCUBATORS HOTCOLD

HOTCOLD S  CONTROLLABLE TEMPERATURES FROM  +5 °C TO 65 °C
HOTCOLD A-B-C  CONTROLLABLE TEMPERATURES FROM  0 °C TO 50 °C
HOTCOLD UB-UC  CONTROLLABLE TEMPERATURES FROM  -10 °C TO 50 °C
HOTCOLD GL  CONTROLLABLE TEMPERATURES FROM  0 °C TO 50 °C (DEPENDING ON WORKING MODE)

SAFETY:
DIN STANDARD 12880.2
SAFETY THERMOSTAT FITTED THAT DISCONNECTS POWER TO THE HEATER IF THE CONTROLLER FAILS. MANUAL RESET.

APPLICATIONS
Enzymatic tests, serum and plasma fractions BOD tests, cosmetics, botany, pharmacy, industry, agriculture, bacteriology, biotechnology and research.

Refrigerated cabinet “Hotcold S”
FORCED AIR CIRCULATION.
DIGITAL ELECTRONIC CONTROL OF TEMPERATURE AND TIME,
ADJUSTABLE FROM +5 °C TO 65 °C.
STABILITY ±0.1 °C, UP TO 20 °C. HOMOGENEITY ±0.5 °C, UP TO
20 °C. SET ERROR ±2 °C.
RESOLUTION 0.1 °C.

FEATURES
Epoxy coated external case. Interior AISI304 stainless steel. Door with double glazed glass to maintain internal temperature. Illumination switch with internal fluorescent light. Side port for the introduction of external cables probes and tubes etc.
Cooling gas R134a.
4 wheels with brake.
Two safety power sockets.

CONTROL SYSTEM
Electronic digital controller for temperature and time.
Timer and off programmable from 1' to 99 hrs 59'.
Programmable defrost.
High and low temperature alarm.
Temperature calibration.

CONTROL PANEL
1. Display for temperature / time.
2. Temperature indicator.
3. Time indicator.
4. Alarm indicator.
5. Heater functioning indicator.
6. Push button for set temperature.
7. Push button for set time.
8. Mains switch.
9. Push button to increase value.
10. Push button to decrease value.
11. Push button to confirm value.

STANDARD EQUIPMENT
2 shelves and 4 shelf guides.

MODEL

<table>
<thead>
<tr>
<th>HOTCOLD</th>
<th>Part No.</th>
<th>Range °C</th>
<th>Capacity litres</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Number of shelves</th>
<th>Motor HP</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>2101618</td>
<td>+5</td>
<td>65</td>
<td>160</td>
<td>50</td>
<td>65</td>
<td>60</td>
<td>132</td>
<td>63</td>
</tr>
</tbody>
</table>

Optimum temperature homogenization can be achieved with an even load distribution of up to 70% unit volume.

Tel: 1-201-599-1400 • Fax: 1-201-599-1406 • mail@globescientific.com • www.globescientific.com
Precise refrigerated cabinets “Hotcold A-B-C-UB-UC”

FORCED AIR CIRCULATION.
DIGITAL ELECTRONIC CONTROL OF TEMPERATURE AND TIME.
HOTCOLD A-B-C ADJUSTABLE TEMPERATURE FROM 0 °C TO 50 °C.
HOTCOLD UB-UC ADJUSTABLE TEMPERATURE FROM -10 °C TO 50 °C.

SAFETY:
DIN STANDARD 12880.2. SAFETY THERMOSTAT FITTED THAT DISCONNECTS POWER TO THE HEATER IF THE CONTROLLER FAILS. MANUAL RESET.

FEATURES
Exterior case, door and interior made from AISI 304 stainless steel.
Steel shelves, PVC laminated.
Reversible door which can be opened by either side, with easy to change the lock and the joint, manual lockout.
Hermetically sealed compressor with anti vibration mounts with fan forced evaporating unit with ventilated condenser
Homogeneous internal temperature by forced circulating air.
Refrigerant R134 for models B and C.
Refrigerant R404 for model UB and UC.
Two safety power sockets.

MODELS

<table>
<thead>
<tr>
<th>Model</th>
<th>Part No.</th>
<th>Range °C</th>
<th>Capacity litres</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Number of shelves</th>
<th>Included shelves</th>
<th>Power W</th>
<th>Power HP</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2101502</td>
<td>0 - +50</td>
<td>319</td>
<td>139 / 48 / 45</td>
<td>198 / 60 / 64</td>
<td>14</td>
<td>3</td>
<td>236</td>
<td>1/5</td>
<td>78</td>
</tr>
<tr>
<td>B</td>
<td>2101503</td>
<td>0 - +50</td>
<td>442</td>
<td>126 / 58 / 55</td>
<td>198 / 70 / 71</td>
<td>14</td>
<td>3</td>
<td>236</td>
<td>1/5</td>
<td>89</td>
</tr>
<tr>
<td>C</td>
<td>2101504</td>
<td>0 - +50</td>
<td>600</td>
<td>136 / 58 / 69</td>
<td>207 / 70 / 82</td>
<td>14</td>
<td>4</td>
<td>351</td>
<td>3/8</td>
<td>100</td>
</tr>
<tr>
<td>UB</td>
<td>2101505</td>
<td>-10 - +50</td>
<td>442</td>
<td>126 / 58 / 55</td>
<td>198 / 70 / 71</td>
<td>14</td>
<td>3</td>
<td>597</td>
<td>1/2</td>
<td>94</td>
</tr>
<tr>
<td>UC</td>
<td>2101506</td>
<td>-10 - +50</td>
<td>600</td>
<td>138 / 58 / 69</td>
<td>207 / 70 / 82</td>
<td>14</td>
<td>4</td>
<td>593</td>
<td>1/2</td>
<td>110</td>
</tr>
</tbody>
</table>

NOTE: the HOTCOLD has internal power sockets that allows the use of a non-heating mixer shaker or stirrer or equipment for BOD assays to be powered internally. Alternatively power cables can be fed through external ports at each side of the unit. See chapter Mixers stirrers and shakers.

ACCESSORIES

USB adapter model.
Pan-Drive included (Memory board) for data storage.
Part No. 410131

Printer shows temperature and time. Needs to be factory fitted.
Part No. 2101508

SPARES

Brackets and guides.
Cabinet Part No. 2101502 / 2101503 / 2101505 / 2101504 / 2101506

Brackets set (4 units). 1001801 / 1001805

Shelves 1001804 / 1001806

Each self requires 4 brackets i.e. one set.

Tel: 1-201-599-1400 • Fax: 1-201-599-1406 • mail@globescientific.com • www.globescientific.com
Precision refrigerated cabinets “Hotcold GL”

FORCED AIR CIRCULATION.
DIGITAL ELECTRONIC CONTROL OF TEMPERATURE, TIME AND HUMIDITY.
SUITABLE FOR TEMPERATURES FROM 5 °C TO 50 °C.

SAFETY:
SAFETY STANDARD: CONFORMS TO THE DIN 12880.2.
ADJUSTABLE OVER TEMPERATURE CUT OUT FITTED THAT CUTS OFF HEATING IF OVER TEMPERATURE FAILS, MANUAL RESET.

APPLICATIONS
Refrigerated climate cabinet for botany testing of plants, flowers, seed germination, photosynthesis agriculture etc. that require control of temperature, humidity and light.
Specifically designed with four function modes:
Mode A: Refrigerated incubator from 5 °C to 50 °C.
Mode B: Refrigerated incubator with illumination from 10 °C to 50°C
Mode C: Refrigerated incubator from 18 °C to 40 °C with an adjustable humidity range from 50 to 98%.
Mode D: Refrigerated incubator with illumination from 18 °C to 40 °C with an adjustable humidity range from 50 to 98%.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Humidity</th>
<th>Illumination</th>
<th>Temperature range</th>
<th>Stability</th>
<th>Homogeneity</th>
<th>Resolution</th>
<th>Set Error</th>
<th>Humidity range (Choice of 3)</th>
<th>Humidity resolution</th>
<th>Humidity precision</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>NO</td>
<td>NO</td>
<td>5 / 50 °C</td>
<td>±0.5 °C</td>
<td>±1.0 °C</td>
<td>0.1 °C</td>
<td>±1.0 °C</td>
<td>50 / 98% Hr</td>
<td>±3%</td>
<td>50 - 75%</td>
</tr>
<tr>
<td>B</td>
<td>NO</td>
<td>YES</td>
<td>10 / 50 °C</td>
<td>±0.5 °C</td>
<td>±1.0 °C</td>
<td>0.1 °C</td>
<td>±1.0 °C</td>
<td>50 / 80% Hr</td>
<td>1%</td>
<td>50 - 60%</td>
</tr>
<tr>
<td>C</td>
<td>YES</td>
<td>NO</td>
<td>18 / 40 °C</td>
<td>±0.5 °C</td>
<td>±1.0 °C</td>
<td>0.1 °C</td>
<td>±1.0 °C</td>
<td>50 / 98% Hr</td>
<td>±3%</td>
<td>50 - 75%</td>
</tr>
<tr>
<td>D</td>
<td>YES</td>
<td>YES</td>
<td>18 / 40 °C</td>
<td>±0.5 °C</td>
<td>±1.0 °C</td>
<td>0.1 °C</td>
<td>±1.0 °C</td>
<td>50 / 98% Hr</td>
<td>±3%</td>
<td>50 - 75%</td>
</tr>
</tbody>
</table>

FEATURES
Exterior case, door and interior made from AISI 304 stainless steel. Reversible door can be fitted to open from either side, with automatic closing if left open.
The door interior supplies fluorescent illumination to the chamber, the power of which can be selected as 0 / 4K or 12 K Lux.
Hermetically sealed compressor with anti vibration mounts with fan forced evaporation unit with ventilated condenser.
Fan circulated homogeneous temperature.
All operation modes are programmable in up to 5 cycles of which each cycle can be programmed at 1 hour intervals. These cycles can be repeated indefinitely or can be manually terminated.
The humidity is constant during the program.
There are 10 Program storage memories of all parameters.
The fan, temperature radiator and two thermal safety internal electrical sockets are located in the upper chamber.

MODEL

<table>
<thead>
<tr>
<th>HOCOLD</th>
<th>Part No.</th>
<th>Range °C</th>
<th>Capacity litres</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exerior) cm</th>
<th>Number of shelves</th>
<th>Motor HP</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>GL</td>
<td>2101507</td>
<td>5 / +50</td>
<td>600</td>
<td>138 / 58 / 69.5</td>
<td>208 / 75 / 115</td>
<td>14</td>
<td>3 / 8</td>
<td>950</td>
<td>265</td>
</tr>
</tbody>
</table>

NOTE: The Hotcold has internal power sockets that allow the use of a non-heating mixer shaker or stirrer or equipment for BOD assays to be powered internally. Alternatively power cables can be fed through external ports at each side of the unit. See chapter Mixers stirrers and shakers.

Two external ports are located on each side for the introduction of tubes and cables for other diverse applications.
A humidity tray is located at the back of the unit for controlling humidity and is generated through evaporation.
RS-232 Interface output for a computer, printer or USB adapter.

CONTROL PANEL
1. Graphic display.
2. Push button increase value.
3. Push button decrease value.
4 - 5. Push button move cursor.
6. Push button, validate set value.
7. Push button set program.
8. Push button start.
10. Printer for time and temperature (Optional). Part No. 2101508, (needs to be factory fitted).

STANDARD EQUIPMENT
2 shelves and 8 brackets.

USB adapter model.
Pen-Drive included (Memory board) for data storage. Part No. 4120131
Printer shows temperature and time. Needs to be factory fitted. Part No. 2101508

SPARES
Part No.
1001801 Brackets (4) (Set)
1001806 Shelves
Each self requires 4 brackets i.e. one set.

NOTE: The HOCOLD has internal power sockets that allow the use of a non-heating mixer shaker or stirrer or equipment for BOD assays to be powered internally. Alternatively power cables can be fed through external ports at each side of the unit. See chapter Mixers stirrers and shakers.

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7. Push button set program.
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10. Printer for time and temperature (Optional). Part No. 2101508, (needs to be factory fitted).

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2 shelves and 8 brackets.

USB adapter model.
Pen-Drive included (Memory board) for data storage. Part No. 4120131
Printer shows temperature and time. Needs to be factory fitted. Part No. 2101508

SPARES
Part No.
1001801 Brackets (4) (Set)
1001806 Shelves
Each self requires 4 brackets i.e. one set.
Muffle Furnaces

Electric Muffle Furnaces “Select-Horn-TFT”

TEMPERATURE CONTROLLABLE UP TO 1150 °C.
SET ACCURACY: ±1 °C OF THE SET VALUE. RESOLUTION: 1 DIGIT.
DIGITAL ELECTRONIC CONTROLLER FOR TEMPERATURE AND TIME WITH TFT COLOUR TOUCH SCREEN.

SAFETY:
PROBE BREAK DISCONNECTS THE POWER TO THE FURNACE AUTOMATICALLY.
MICROSWITCH THAT DISCONNECTS THE POWER OF THE HEATER ELEMENTS WHEN THE DOOR IS OPEN.
FLAP DOOR THAT CAN ALSO BE USED AS A SUPPORT TRAY AND USER PROTECTED FROM THE HOT INTERNAL SURFACE.

APPLICATIONS
Incineration processes, drying, degradation, re-heating, thermal treatments etc.

FEATURES
Interior chamber constructed from high quality lightweight refractory bricks, with a high alumina content with no asbestos or iron oxide.
Evenly distributed exceptional long life heating elements, annealed frequently at a high fusion point.
Excellent thermal insulation made from Ceramic fibre of low density and thermal conductivity.
Low consumption with maximum performance.
Rapid temperature recovery after the door has been opened.
Flap door with easy to change components.
Support tray made from special steel used as a base to support assay material.
USB and RS-232 output.

CONTROL PANEL
General
Main switch.
TFT touch screen 4.3”.
Clock calendar.
Two working modes, normal or programming.
SPA – FRE – ENG menu.
Self-test on starting.
Temperature control auto-tuning.
°C/F selection.
Type K probe.
Normal mode
Set point temperature selection
Up ramp or no ramp.
Stability time from 1 min to 99h or continuous.
Programming mode
10 programs capacity.
6 segments per program.
Stability time in each segment from 1 min to 99h (or continuous in the last segment)
Up ramps between segments or no ramps
Daily - weekly On / Off programming.

TEMPERATURE CONTROLS

Alarms
Network failure detection alarm.
Probe error detection alarm.
Over temperature and low temperature alarms.
Visual audible warning alarms.
Up to 100 alarms storage (date, start time, end time and alarm type).

Datalogging
Datalogging memory up to 15000 data.
Logging interval from 5 seconds to 30 min.
Data download via RS-232 or USB.
PC software for on-line registration (via RS-232).

MODELS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity litres</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000376</td>
<td>3.6</td>
<td>10 15 24</td>
<td>52 54 56</td>
<td>2500</td>
<td>54</td>
</tr>
<tr>
<td>2000377</td>
<td>9</td>
<td>15 20 30</td>
<td>58 59 65</td>
<td>3000</td>
<td>70</td>
</tr>
</tbody>
</table>

Supplied complete with support tray, made from annealed steel.

Muffle Furnaces

Electric Muffle Furnaces “Select-Horn-TFT”

TEMPERATURE CONTROLLABLE UP TO 1150 °C.
SET ACCURACY: ±1 °C OF THE SET VALUE. RESOLUTION: 1 DIGIT.
DIGITAL ELECTRONIC CONTROLLER FOR TEMPERATURE AND TIME WITH TFT COLOUR TOUCH SCREEN.

SAFETY:
PROBE BREAK DISCONNECTS THE POWER TO THE FURNACE AUTOMATICALLY.
MICROSWITCH THAT DISCONNECTS THE POWER OF THE HEATER ELEMENTS WHEN THE DOOR IS OPEN.
FLAP DOOR THAT CAN ALSO BE USED AS A SUPPORT TRAY AND USER PROTECTED FROM THE HOT INTERNAL SURFACE.

APPLICATIONS
Incineration processes, drying, degradation, re-heating, thermal treatments etc.

FEATURES
Interior chamber constructed from high quality lightweight refractory bricks, with a high alumina content with no asbestos or iron oxide.
Evenly distributed exceptional long life heating elements, annealed frequently at a high fusion point.
Excellent thermal insulation made from Ceramic fibre of low density and thermal conductivity.
Low consumption with maximum performance.
Rapid temperature recovery after the door has been opened.
Flap door with easy to change components.
Support tray made from special steel used as a base to support assay material.
USB and RS-232 output.

CONTROL PANEL
General
Main switch.
TFT touch screen 4.3”.
Clock calendar.
Two working modes, normal or programming.
SPA – FRE – ENG menu.
Self-test on starting.
Temperature control auto-tuning.
°C/F selection.
Type K probe.
Normal mode
Set point temperature selection
Up ramp or no ramp.
Stability time from 1 min to 99h or continuous.
Programming mode
10 programs capacity.
6 segments per program.
Stability time in each segment from 1 min to 99h (or continuous in the last segment)
Up ramps between segments or no ramps
Daily - weekly On / Off programming.

TEMPERATURE CONTROLS

Alarms
Network failure detection alarm.
Probe error detection alarm.
Over temperature and low temperature alarms.
Visual audible warning alarms.
Up to 100 alarms storage (date, start time, end time and alarm type).

Datalogging
Datalogging memory up to 15000 data.
Logging interval from 5 seconds to 30 min.
Data download via RS-232 or USB.
PC software for on-line registration (via RS-232).

MODELS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity litres</th>
<th>Height / Width / Depth (interior) cm</th>
<th>Height / Width / Depth (exterior) cm</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000376</td>
<td>3.6</td>
<td>10 15 24</td>
<td>52 54 56</td>
<td>2500</td>
<td>54</td>
</tr>
<tr>
<td>2000377</td>
<td>9</td>
<td>15 20 30</td>
<td>58 59 65</td>
<td>3000</td>
<td>70</td>
</tr>
</tbody>
</table>

Supplied complete with support tray, made from annealed steel.
Electric muffle furnaces “R-3 L” and “R-8 L” 1100 °C

For temperatures adjustable up to 1100 °C.
Microprocessor control with TFT touch screen.
Precision ±2 °C of the set value.
Resolution: 1 digit.

Features
- Metal external case with vent at the back of the unit.
- Interior and door made of ceramic fibre, resistant and durable (No asbestos). Heater situated at the side and bottom of the chamber.
- USB and RS-232 output.

Control panel
- General
  - Main switch.
  - TFT touch screen 4.3”.
  - Clock calendar.
  - Two working modes, normal or programming.
  - SPA – FRE – ENG menu.
  - Self-test on starting.
  - Temperature control auto-tuning.
  - °C/°F selection.
  - Type K probe.
- Normal mode
  - Set point temperature selection
  - Up ramp or no ramp.
  - Stability time from 1 min to 99h or continuous.
- Programming mode
  - 10 programs capacity.
  - 6 segments per program.
  - Stability time in each segment from 1 min to 99h (or continuous in the last segment)
  - Up ramps between segments or no ramps
  - Daily - weekly On / Off programming.

Alarms
- Network failure detection alarm.
- Probe error detection alarm.
- Over temperature and low temperature alarms.
- Visual audible warning alarms.
- Up to 100 alarms storage (date, start time, end time and alarm type).

Datalogging
- Datalogging memory up to 15000 data.
- Logging interval from 5 seconds to 30 min.
- Data download via RS-232 or USB.
- PC software for online registration (via RS-232).

MODEL | Part No. | Capacity (litres) | Height / Width / Depth (interior) cm | Height / Width / Depth (exterior) cm | Power W | Weight Kg
--- | --- | --- | --- | --- | --- | ---
N-3 | 2000368 | 3 | 11.5 | 12.5 | 20 | 43 | 34 | 47 | 1700 | 18
N-8 | 2000369 | 8 | 13 | 20 | 30 | 51 | 44 | 56 | 1800 | 28

Supplied complete with a refractory ceramic tray as a base and support for material to be assayed.

Accessories for muffle furnaces
Adaptable only for “Select-Horn-TFT” furnaces Part No. 2000376 and 2000377
All accessories need to be fitted in the factory prior to delivery.

Complements
- Gloves Thermal “Kevlar 800”
  Conforms to EN 388, EN407 and EN420 standards.
  For use with temperatures up to 800 °C. Made from seamless terry knit, with double face fibres, high level of protection against heat and flame.
  Length 36 cm, universal fit.
  Part No. 5000042

- Crucible tongs.
  With thermally protected plastic coated handles. With bow, curved tips.
  Part No. 1001590 Total length 220 mm
  Part No. 1001591 Total length 330 mm

- Crucibles made of zirconium Zr.
- Crucibles made of pure nickel Ni.
- Crucibles made of glazed porcelain.
- Crucibles made of stainless steel.
- Crucibles made of quartz.
(See page 182).
Electric muffle furnace “N-30 L” 1300 °C

FOR TEMPERATURES ADJUSTABLE UP TO 1300 °C.
ELECTRONIC DIGITAL TEMPERATURE CONTROL.
PRECISION ±2 °C OF THE SET VALUE.
RESOLUTION: 1 DIGIT.

FEATURES
Metal external case with vent at the back of the unit. Interior and door made from ceramic fibre, resistant and durable (No asbestos). Heater situated at the side and bottom of the chamber.

CONTROL PANEL
Illuminated mains On/Off switch.
Temperature control with digital display of both the set and actual temperature.
Programmable in steps of 1 °C.
Fitted with a type K probe.

MODEL
Part No. | Capacity | Height / Width / Depth (interior) cm | Height / Width / Depth (exterior) cm | Power | Voltage | Weight
---|---|---|---|---|---|---
N-30 L | 2200853 | 30 | 27.5 24 43 | 63 87 84 | 4600 | 230 | 120

Supplied complete with a refractory ceramic tray as a base and support for material to be assayed.

Electric muffle furnaces “N-3 L”, “N-8 L”, “N-13 L”, “N-22 L” and “N-80 L” 1100 °C

FOR TEMPERATURES ADJUSTABLE UP TO 1100 °C.
ELECTRONIC DIGITAL TEMPERATURE CONTROL.
PRECISION ±2 °C OF THE SET VALUE.
RESOLUTION: 1 DIGIT.

FEATURES
Metal external case with vent at the back of the unit. Interior and door made from ceramic fibre, resistant and durable (No asbestos). Heater situated at the side and bottom of the chamber.

CONTROL PANEL
Illuminated mains On/Off switch.
Temperature control with digital display of both the set and actual temperature.
Programmable in steps of 1 °C.
Fitted with a type K probe.

MODELO
Part No. | Capacity | Height / Width / Depth (interior) cm | Height / Width / Depth (exterior) cm | Power | Voltage | Weight
---|---|---|---|---|---|---
N-3 L | 2200850 | 3 | 11.5 12.5 20" | 43 34 47 | 1700 | 230 | 18
N-8 L | 2200851 | 8.2 | 14 20 30 | 50 44 53 | 1800 | 220 | 33
N-13 L | 2200852 | 13 | 18 22.5 36 | 55 50 70 | 1800 | 230 | 38
N-22 L | 2200854 | 22 | 15.5 27.5 50 | 61 60 89 | 3000 | 230 | 58
N-80 L | 2200855 | 80 | 48 40 40 | 157 94 98 | 7500 | 400 / 3 N | 170

Supplied complete with a refractory ceramic tray as a base and support for material to be assayed.