Incubators, Ovens & Furnaces

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- Furnaces to 1800°C
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- High Temperature Ovens
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- Large Drying
- Universal Precision Ovens
- Vacuum Drying Ovens
## Ovens, Incubators and Furnaces

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<table>
<thead>
<tr>
<th>Category</th>
<th>Temperature Range</th>
<th>Control Type</th>
<th>Model Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sterilisers Poupinel</strong></td>
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<td>2000911</td>
</tr>
<tr>
<td></td>
<td>Up to 250 °C</td>
<td>DRYTERM ANALOGUE</td>
<td>2000787</td>
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<tr>
<td><strong>Glass Drying</strong></td>
<td>Up to 250 °C</td>
<td>DRYGLASS ANALOGUE</td>
<td>2000381</td>
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<tr>
<td><strong>Natural Convection</strong></td>
<td>Up to 250 °C</td>
<td>CONTERM ANALOGUE</td>
<td>2000208, 2000209, 2000200, 2000210, 2000201</td>
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<tr>
<td><strong>Bench Top Fan Assisted</strong></td>
<td>Ambient +5 … 250 °C</td>
<td>DIGITHEAT DIGITAL</td>
<td>2001241, 2001242, 2001243, 2001244, 2001245</td>
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<tr>
<td><strong>Large Size Fan Assisted</strong></td>
<td>Ambient +5 … 250 °C</td>
<td>DIGITRONIC glass door DIGITAL</td>
<td>2005132, 2005152, 2005142, 2005162</td>
</tr>
<tr>
<td><strong>High Temperature</strong></td>
<td>Up to 250 °C</td>
<td>HIGHTEMP 230 III PHASE DIGITAL</td>
<td>2001405</td>
</tr>
<tr>
<td><strong>Vacuum Oven</strong></td>
<td>Ambient +5 … 170 °C</td>
<td>VACIOTEM ANALOGUE</td>
<td>4000571</td>
</tr>
<tr>
<td><strong>Incubation Chamber</strong></td>
<td>Ambient +5 … 57 °C</td>
<td>BOXCULT DIGITAL</td>
<td>3000957</td>
</tr>
<tr>
<td><strong>Bench Top Incubators</strong></td>
<td>Ambient +5 … 80 °C</td>
<td>INCUBAT ANALOGUE</td>
<td>2000205, 2000206, 2000207, 2000944</td>
</tr>
<tr>
<td><strong>Large Size Incubators</strong></td>
<td>Ambient +5 … 80 °C</td>
<td>INCUBIG DIGITAL</td>
<td>2000237, 2000247</td>
</tr>
<tr>
<td><strong>Low Temperature Precision Incubators</strong></td>
<td>Ambient +5 … 50 °C</td>
<td>PREBATEM DIGITAL</td>
<td>2000961, 2000962, 2001250</td>
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<tr>
<td><strong>CO₂ Incubators</strong></td>
<td>Ambient +5 … 50 °C</td>
<td>INCUBATOR CO₂ DIGITAL</td>
<td>4000962, 4000963, 4000964</td>
</tr>
<tr>
<td><strong>Refrigerated Incubators</strong></td>
<td>Ambient +5 … 60 °C</td>
<td>HOTCOLD DIGITAL</td>
<td>4000668, 4000669, 4000670</td>
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<tr>
<td><strong>Muffle Furnace</strong></td>
<td>Ambient +5 … 50 °C</td>
<td>HOTCOLD GL DIGITAL</td>
<td>4000671, 4000672, 4000673</td>
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<tr>
<td></td>
<td>Ambient +5 … 60 °C</td>
<td>HOTCOLD UM / UL DIGITAL</td>
<td>4000691, 4000692, 4000693</td>
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<tr>
<td><strong>Muffle Furnace</strong></td>
<td>50 … 1150 °C</td>
<td>SELECT-HORN DIGITAL</td>
<td>2000366, 2000367</td>
</tr>
</tbody>
</table>

Online: www.cometacientifica.com
**Poupinel dry heat steriliser ‘Drytime’**

ADJUSTABLE TEMPERATURES FROM 100 °C up to 250 °C. STABILITY: ±6 °C.

**Applications**

For surgical sterilisation 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

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity</th>
<th>Height/Width/Depth (internal) cm</th>
<th>Height/Width/Depth (external) 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>9</td>
</tr>
</tbody>
</table>

**Poupinel dry heat steriliser ‘Dryterm’**

TEMPERATURES ADJUSTABLE FROM 60 °C up to 250 °C.

STABILITY: ±6 °C.

**Applications**

For surgical sterilisation 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 with a heater cover, three shelf runners and two perforated shelves with 10 mm high
- Epoxy-coated outer casing

**Safety**

- Safety thermostat incorporated EN.61010 Standard.

**Control Panel**

- Hydraulic thermostat for temperature control
- Locking device for thermostat knob
- Timer 0 to 120 min. with automatic off
- Analogue temperature reading thermometer

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity l</th>
<th>Height/Width/Depth (internal) cm</th>
<th>Height/Width/Depth (external) cm</th>
<th>Power W</th>
<th>Weight Kg</th>
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<tr>
<td>2000787</td>
<td>19</td>
<td>25 32 23</td>
<td>37 54 34</td>
<td>770</td>
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</tbody>
</table>
Glass drying oven ‘Dryglass’
FAN ASSISTED AIR CIRCULATION. FOR ADJUSTABLE TEMPERATURE FROM 40 °C to 70 °C.

Features

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

Safety

Over temperature safety cut out incorporated EN.61012 Standard.
Adjustable over temperature safety thermostat can be added as an accessory to comply with the DIN 12.880.2 Standard.

Standard equipment

2 shelves and 4 guides.

Control Panel

Dual heating power selector switch.
Mains indicator lamp.
Hydraulic thermostat for temperature control.
Locking device for thermostat knob.
Heater operation indicator lamp.
Analogue temperature reading thermometer.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity</th>
<th>Height/Width/Depth (internal) cm</th>
<th>Height/Width/Depth (external) cm</th>
<th>Shelf Positions</th>
<th>Power W</th>
<th>Wt Kg</th>
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</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>58</td>
</tr>
</tbody>
</table>

Accessories

Accessories must be factory installed.

- **Part No.** 2000001 Safety thermostat which disconnects the heating in case of oven’s own thermostat failing, comes with manual reset (conforms to DIN 12.880 class 2)

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

Spares

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

Online: www.cometacientifica.com

Ovens, Incubators and Furnaces
**Oven and Incubator Series 2000**

- Natural Air Convection, Drying and Sterilisation.
- Fan Assisted Circulation, Universal Applications.
- Natural Air Convection, Bacteriology and Incubation.

**Control**: Analogue or Digital Processor for Temperature and Time, Model Dependent.


**Safety**: Standard EN.61010. Incorporated Fixed over Temperature Device. Standard DIN 12880.2. This standard is accomplished by the addition of a Safety Thermostat, supplied as a factory fitted accessory.

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**General Features**

**Construction.**
1. External case treated with a corrosive resistant epoxy coating.
2. Interior: 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 inner door seal that adjusts automatically, maintains the best possible seal.

**Technical Properties**
6. Excellent thermal qualities and insulation that make for the best optimum performance between the heater capacity and power consumption, limiting external temperature influences.
7. Independent heating chamber for the heating elements to obtain an even heat distribution and rapid temperature equilibrium and stabilisation.

Fan assisted convection models have a turbo fan. All incubators for bacteriology and cell culture have a second inner door of tempered glass.

**Technology from J. P. Selecta.**
8. Locking device on analogue temperature controls.
10. Double seal around the chamber to ensure for a gentle but effective seal.
11. Floating spring door that adjusts to pressure and absorption of thermal expansion.
12. Adjustable door pressure lock that permits the pressure door adjustment.

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**NOTE:**
For all models, the values for stability and homogeneity shown are based on temperature conditions with the ventilation closed. The optimum homogenisation 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. Mains switch.
2. "On" indicator lamp.
3. Temperature control thermostat.
4. Heating "ON" indicator lamp.
5. Analogue thermometer.
6. Vacant positions for other accessories.

Models with digital processor control.
1. Mains switch with "ON" indicator.
2. Temperature mode indicator.
3. Time mode indicator.
4. Display for temperature and time.
5. Operating, "RUN" 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 Start / Stop.
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.

Model summary table

<table>
<thead>
<tr>
<th>TYPE</th>
<th>CONTERM</th>
<th>DIGITHEAT</th>
<th>DIGITRONIC</th>
<th>INCUBAT</th>
<th>INCUDIGIT</th>
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<tbody>
<tr>
<td>CONTROL</td>
<td>Dry oven</td>
<td>Dry Oven</td>
<td>Universal</td>
<td>Incubator</td>
<td>Incubator</td>
</tr>
<tr>
<td>DISPLAY</td>
<td>Temperature</td>
<td>Temperature + time</td>
<td>Temperature + time</td>
<td>Temperature</td>
<td>Temperature + time</td>
</tr>
<tr>
<td>AIR</td>
<td>Convection</td>
<td>Convection</td>
<td>Digital</td>
<td>Convection</td>
<td>Convection</td>
</tr>
<tr>
<td>CIRCULATION</td>
<td>natural</td>
<td>natural</td>
<td>Digital</td>
<td>natural</td>
<td>natural</td>
</tr>
</tbody>
</table>

Accessories

Part No. 2000001 Safety Thermostat which disconnects the heating in the case of the oven’s own thermostat failing. Manual reset. (conforms to DIN 12.880 Class 2). Suitable for CONTERM, DIGITHEAT and DIGITRONIC.

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

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

Part No. 2000005 Safety Thermostat which disconnects the heating in the case of the incubator’s own thermostat failing. Manual reset. (conforms to DIN 12.880 Class 3.1). Suitable for INCUBAT and INCUDIGIT.

Part No. 2000009 Programmer of 24 hours with continuous cycling up to every 15 minutes. Suitable for CONTERM and INCUBAT.

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

Part No. 2000007 Programmable Digital Microprocessor. 8 programs of 16 steps. Programmable from 1 minute to 99 hours 59 minutes. Programs can be repeated up to 999 times. Programs can also be linked up to 4 times. RS-232 printer output. Suitable for DIGITRONIC.
## Drying and sterilisation ovens ‘Conterm’

**NATURAL CONVECTION.**
**TEMPERATURE THERMOSTAT CONTROL WITH ANALOGUE THERMOMETER.**
**FOR ADJUSTABLE TEMPERATURES FROM 40 °C up to 250 °C.**
**STABILITY: ±0.5 °C. HOMOGENIETY: ±2 % OF THE WORKING TEMPERATURE.**

CONTROL PANEL OPTIONS, SAFETY SYSTEMS AND CONFORMITY TO STANDARDS, SEE GENERAL FEATURES.

### Standard equipment
2 shelves and 4 guides.

<table>
<thead>
<tr>
<th>Oven Part No.</th>
<th>Capacity</th>
<th>Part No.</th>
<th>HW/D (internal) cm</th>
<th>HW/D (external) cm</th>
<th>Shelf Positions</th>
<th>Power W</th>
<th>Wt Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000208</td>
<td>19</td>
<td>2000208</td>
<td>30</td>
<td>50</td>
<td>25</td>
<td>60</td>
<td>44</td>
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<tr>
<td>2000209</td>
<td>36</td>
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<td>40</td>
<td>60</td>
<td>30</td>
<td>65</td>
<td>49</td>
</tr>
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<td>2000200</td>
<td>52</td>
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<td>2000201</td>
<td>60</td>
<td>95</td>
<td>50</td>
<td>70</td>
<td>68</td>
</tr>
</tbody>
</table>

Performance graph of temperature and time.
- Set at 250 °C: 1 hr 30 min.
- Set at 180 °C: 1 hr 12 min.
- Set at 100 °C: 1 hr

### Accessories
Accessories need to be factory fitted.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000001</td>
<td>Adjustable Safety thermostat</td>
</tr>
<tr>
<td>2000002</td>
<td>Timer switch of 0-120 min.</td>
</tr>
<tr>
<td>2000003</td>
<td>Timer switch of 0-12 hours.</td>
</tr>
<tr>
<td>2000009</td>
<td>Programmer, 24 hours.</td>
</tr>
</tbody>
</table>

Model Conterm, Part No. 2000208, 2000209 and 2000210.

Model Conterm (Type Poupinel), Part No. 2000200 and 2000201.

Online: www.cometacientifica.com
Drying and sterilising ovens ‘Digitheat’

NATURAL CONVECTION
DIGITAL CONTROL AND DISPLAY OF TEMPERATURE AND TIME.
ADJUSTABLE TEMPERATURE FROM AMBIENT +5 °C up to 250 °C.
STABILITY: ±0.25 °C. HOMOGENIETY: ±2 % OF THE WORKING TEMPERATURE.
SET ERROR: ±2 % OF THE WORKING TEMPERATURE. RESOLUTION: 1°C.

CONTROL PANEL OPTIONS, SAFETY SYSTEMS AND CONFORMITY TO STANDARDS, SEE GENERAL FEATURES.

Model Digiteart, Part No. 2001241 and 2001242.

Standard equipment
2 shelves and 4 guides.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity</th>
<th>HW/D (internal) cm</th>
<th>HW/D (external) cm</th>
<th>Shelf</th>
<th>Power</th>
<th>Wt</th>
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<td>5</td>
<td>600</td>
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<td>900</td>
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<td>2001243</td>
<td>52</td>
<td>33</td>
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<td>5</td>
<td>1000</td>
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<td>2001244</td>
<td>80</td>
<td>40</td>
<td>40</td>
<td>8</td>
<td>1200</td>
<td>51</td>
</tr>
<tr>
<td>2001245</td>
<td>150</td>
<td>50</td>
<td>60</td>
<td>8</td>
<td>2000</td>
<td>68</td>
</tr>
</tbody>
</table>

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

Accessories
Accessories need to be factory fitted.

Part No.
2000001 Adjustable safety thermostat.
20000019 Temperature chart recorder.
20000016 Digital temperature recorder.

Online: www.cometacientifica.com
Ovens, Incubators and Furnaces
Universal precision ovens ‘Digitronic’

FAN ASSISTED CIRCULATION.
BACTERIOLOGICAL, DRYING PROCESSES AND STERILISATION.
DIGITAL CONTROL AND DISPLAY OF TEMPERATURE AND TIME.
FOR ADJUSTABLE TEMPERATURES FROM AMBIENT +5 °C up to 250 °C.
STABILITY: ±0.25 °C, HOMOGENIETY: ±2 % OF THE WORKING TEMPERATURE.
SET ERROR: ±2 % OF THE WORKING TEMPERATURE: 1 °C.

Features

1. Digital control and display of temperature with pre-set programmable run time. Temperature monitored with a Pt 100 sensor probe.
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 exterior 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 absorbs and adjusts for thermal expansion.
8. Turbo fan made of AISI 304 stainless steel that acclimatises to the working temperature.
9. Diagram showing the air flow from the premixing chamber around the heating elements to the chamber of the oven.
10. Independent insulated control box.
11. Control panel with additional locations for mounting accessories.
12. Epoxy coated outer case.
13. Ventillator with adjustable out let (access at the back of the unit).
16. Toughened double safety glass door window for viewing the contents of the oven without having to open the door. (Model dependent).

CONTROL PANEL OPTIONS, SAFETY SYSTEMS AND CONFORMITY TO STANDARDS

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RS-232 interface for data down load to a printer or computer.

Model Digitronic with solid metal door. Part No. 2005131 and 2005141.
(With toughened glass window door. Part No.2005132 and 2005142).

Online:www.cometacientifica.com
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Model Digitronic (Type Poupinel), door with toughened double glass window.
Part No. 2005152 and 2005162.

Model Digitronic (Type Poupinel)
Part No. 2005151 and 2005161.

Standard equipment
2 Shelves and 4 guides.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity</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>HW/D (internal) cm</th>
<th>H/W/D (external) cm</th>
<th>Shelf positions</th>
<th>Power W</th>
<th>Wt Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005131</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>2005132</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>45</td>
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<tr>
<td>2005151</td>
<td>47</td>
<td>metal</td>
<td>16</td>
<td>7</td>
<td>16</td>
<td>45 32</td>
<td>53 81 58</td>
<td>5</td>
<td>1200</td>
<td>43</td>
</tr>
<tr>
<td>2005152</td>
<td>47</td>
<td>glass</td>
<td>16</td>
<td>7</td>
<td>16</td>
<td>45 32</td>
<td>53 81 58</td>
<td>5</td>
<td>1200</td>
<td>50</td>
</tr>
<tr>
<td>2005141</td>
<td>76</td>
<td>metal</td>
<td>17</td>
<td>9</td>
<td>14</td>
<td>50 40</td>
<td>70 75 65</td>
<td>8</td>
<td>1600</td>
<td>60</td>
</tr>
<tr>
<td>2005142</td>
<td>76</td>
<td>glass</td>
<td>17</td>
<td>9</td>
<td>14</td>
<td>50 40</td>
<td>70 75 65</td>
<td>8</td>
<td>1600</td>
<td>66</td>
</tr>
<tr>
<td>2005161</td>
<td>145</td>
<td>metal</td>
<td>17</td>
<td>10</td>
<td>12</td>
<td>50 50</td>
<td>70 95 72</td>
<td>8</td>
<td>2000</td>
<td>78</td>
</tr>
<tr>
<td>2005162</td>
<td>145</td>
<td>glass</td>
<td>17</td>
<td>10</td>
<td>12</td>
<td>50 50</td>
<td>70 95 72</td>
<td>8</td>
<td>2000</td>
<td>85</td>
</tr>
</tbody>
</table>

* Recovery time, the door was opened for 1 minute, time taken to recover to the set temperature of 100 °C.

Performance graph of temperature and time.
- Set at 250 °C: 60'.
- Set at 100 °C: 18'.
- Set at 37 °C: 12'.

Note: The stability and homogeneity curves for time and temperature shown on the graph apply to models that have a metal door.

Accessories
Shelves and guides.

Online: www.cometacientifica.com

Accessories need to be factory fitted.

Part No.
2000001 Adjustable safety thermostat.
2000019 Temperature chart recorder.
2000016 Digital temperature recorder.
2000007 Digital microprocessor programmer.

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Large drying and sterilisation ovens ‘Dry-Big’

FAN ASSISTED CIRCULATION.
DIGITAL CONTROL AND DISPLAY OF TEMPERATURE AND TIME.
ADJUSTABLE TEMPERATURES FROM 40 °C up to 250 °C
STABILITY: ±0.25 °C; HOMOGENIETY: ±2.5 % OF THE WORKING TEMPERATURE.
SET ERROR: ±2.5 % OF THE WORKING TEMPERATURE; RESOLUTION: 1 °C.

SAFETY:
STANDARD EN.61010. INCORPORATED FIXED OVER TEMPERATURE DEVICE
STANDARD DIN 12880.2. THIS STANDARD IS ACCOMPLISHED BY THE ADDITION OF A SAFETY THERMOSTAT THAT IS SUPPLIED AS A FACTORY FITTED ACCESSORY.

...... Reaches working and recovery temperature with minimum delay ......

Features

1. Digital control and display of temperature
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 exterior 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 around the heating elements to the chamber of the oven.
8. Independent insulated control box.
10. Ventilator with adjustable outlet of 48 Ø mm.
13. Flexible silicon door gasket around the entrance of the chamber.
15. RS 232 data output for computer or printer.

Control Panel

1. Mains switch with “ON” indicator.
2. Temperature mode indicator.
3. Time mode indicator.
4. Display for temperature and time.
5. Operating, “RUN” 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 Start / Stop.
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.
### Ovens, Incubators and Furnaces

#### Performance Graph of Temperature and Time

- **Part No.** 2000007
- **Programmable Digital Microprocessor.** 8 programs of 16 steps, programmable from 1 minute to 99 hours 59 minutes. Programs can be repeated up to 999 times. Programs can also be linked with up to 4 stages. RS-232 printer output.

#### Accessories

- **Safety thermostat which disconnects the heating in case of oven’s own thermostat failure, with manual reset (conforms to DIN 12,880 class 2).**
- **Digital printer of time and temperature with numerical print on continuous paper with print intervals for 1 minute to 99 hours.**
- **Graphic register for temperature with continuous paper roll.**
- **Adjustable air vent of 120 mm Ø, for very humid samples.**

#### Standard equipment

- **2 shelves.**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Voltage</th>
<th>Capacity (l)</th>
<th>Heating rate to 100 °C (minutes)</th>
<th>Recovery time * (minutes)</th>
<th>Air exchange per hour</th>
<th>Height/Width/Depth (internal) cm</th>
<th>Height/Width/Depth (external) cm</th>
<th>Shelf</th>
<th>Power (W)</th>
<th>Wt (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002960</td>
<td>230 3 phase</td>
<td>216</td>
<td>18</td>
<td>10</td>
<td>60</td>
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<td>230 1 phase</td>
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<td></td>
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<td>18</td>
<td>10</td>
<td>80</td>
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<td>107</td>
<td>112</td>
<td>84</td>
<td>8</td>
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<tr>
<td>2002971</td>
<td>400 3 phase</td>
<td>230 1 phase</td>
<td></td>
<td></td>
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<td>152</td>
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<td></td>
<td>6000</td>
<td>260</td>
</tr>
</tbody>
</table>

A three phase unit is recommended for energy saving.

*Recovery time, the door was opened for 1 minute, time taken to recover to the set temperature of 100 °C.

---

**Ovens, Incubators and Furnaces**

Online: [www.cometacientifica.com](http://www.cometacientifica.com)
High temperature oven Hightemp

**FAN CONVECTION.**
**DIGITAL CONTROL AND DISPLAY OF TEMPERATURE AND TIME.**
**ADJUSTABLE TEMPERATURES FROM 60 °C up to 400 °C.**
**STABILITY: ±1 °C. HOMOGENIETY: ±3 % OF THE WORKING TEMPERATURE.**
**SET ERROR : ±2 % OF THE WORKING TEMPERATURE. RESOLUTION: 1 °C.**

**SAFETY:**
**ADJUSTABLE OVER TEMPERATURE THERMOSTAT CONFORMS TO THE DIN 12880.2 STANDARD.**

### Features
- Digital electronic temperature control. Insulated independent control box chamber.
- Shielded heating elements.
- Fan circulation motor with thermal cut out that operates independently from the heating elements, activated if the motor overheats during the cooling cycle. Inner chamber in AISI 310 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.

### Standard equipment
- 2 shelves made of AISI 310 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 disconnects the heating in case of a fault in the oven’s own temperature controller (according to DIN 12.880 class 2).

### Accessories
- Accessories need to be factory fitted.
- **Part No.** 2000002 Timer switch of 0-120 min.
- **Part No.** 2000003 Timer switch of 0-12 hours.
- **Part No.** 2000009 24 hour programmer with continuous ON/OFF cycling up to every 15 minutes.

### Graph of temperature and time.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Voltage Capacity</th>
<th>HWID (internal) cm</th>
<th>HWID (external) cm</th>
<th>Shelf Pos</th>
<th>Power W</th>
<th>Wt Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001405</td>
<td>230 3 phase</td>
<td>80</td>
<td>50</td>
<td>80</td>
<td>4000</td>
<td>75</td>
</tr>
<tr>
<td>2001406</td>
<td>400 3 phase</td>
<td>120</td>
<td>61</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Available online: [www.cometacientifica.com](http://www.cometacientifica.com)
Vacuum drying oven ‘Vaciotem’

ADJUSTABLE TEMPERATURES FROM 35 °C up to 200 °C. STABILITY: ±2 °C.

SAFETY
OVER TEMPERATURE CUT OUT INCORPORATED ACCORDING TO THE EN.61010 STANDARD.
DIN 12880.2 STANDARD. THIS STANDARD IS MET BY INCORPORATING A SAFETY THERMOSTAT AVAILABLE AS AN ACCESSORY.

Features
Temperature control; hydraulic thermostat.
Heating elements surrounding the vacuum chamber.
Cylindrical inner chamber made of AISI 304 stainless steel.
Removable shelves and guides.
Door with hardened glass window, which sits onto a silicon gasket which absorbs any contractions and expansions which may occur.
Easy to use door seal.
Vacuum port with bleed valve.
Temperature thermometer within the chamber, easily visible through the window.
Epoxy-coated outer case.

Standard equipment
2 shelves

Control Panel
Vacuum gauge.
Air connection inlet.
Air inlet valve.
Mains indicator lamp.
Main switch.
Heater operation indicator lamp.
Temperature control: Hydraulic thermostat.
Temperature locking device on the thermostat knob.

Note: The optimum homogenisation of temperature within the chamber is based on a reasonable load that does not surpass more than 70 % of the volume of the chamber.

Graph of temperature and time.

Part No. Max. vacuum Vol chamber cm Depth chamber cm H/W/D (external) cm Shelf guides Power W Wt Kg
4000571 10⁻² mm Hg 47 34 52 54 76 70 2 2000 73

Online: www.cometacientifica.com
**Heated vacuum desiccator ‘Vacuo-Temp’**

Adjustable temperatures from 50 °C up to 170 °C.
Stability: 1 °C. Resolution: 1 °C.

### Features
- Electronic temperature control and digit display.
- Pt 100 temperature probe.
- Polished aluminium alloy surface plate to ensure an effective vacuum seal.
- Shielded heating element.
- AISI 304 stainless steel outer casing.
- Vacuum pump connection at the back of the unit.
- Tempered glass bell jar with silicon gasket seal.
- Vacuum bleed valve.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Maximum vacuum</th>
<th>Chamber volume l</th>
<th>Ø Hotplate cm</th>
<th>Height/Width/Depth (external) cm</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>4000474</td>
<td>10 m Hg</td>
<td>3</td>
<td>23.5</td>
<td>17 28 34</td>
<td>600</td>
<td>9</td>
</tr>
</tbody>
</table>

Supplied with bell jar and silicon gasket.

### Control Panel
- Main switch.
- Push button temperature control.
- Digital temperature display.
- Analogue vacuum gauge.

### Spare Parts
Tempered glass bell 15 cm. high and 23 cm Ø
Part No. 4000475
Silicon gasket. Part No. 4000476

---

**Vacuum equipment, Accessories**

### VACUUM PUMP “VACUUM”
- Rotary pump with anti-return veins, complete with oil, suitable for general vacuum applications.
- Motor with over temperature cut-out and separate mains power switch.
- Recommended for the “Vaciotem” and “Vacuo-Temp”

### Features
- Asbestos free vein-blades and connections.
- Push on nozzle inlet.
- Oil level indicator and forced lubrication.
- Oil vapour filter.
- Easy to use and effective.
- Vibration free.
- Noise level below (62 dB).
- Maximum working temperature: 60 °C.
- Portable.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Maximum vacuum</th>
<th>Chamber volume l</th>
<th>Ø Hotplate cm</th>
<th>Power W</th>
<th>Weight Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>VACUUM</td>
<td></td>
<td></td>
<td>20</td>
<td>97</td>
<td>3</td>
</tr>
</tbody>
</table>

### VACUUM DIAPHRAGM PUMP “VACUM-SEL”
- Small bench top model.
- Quiet, vibration free.
- Maximum working temperature: 40 °C

### Features
- Electronic temperature control and digit display.
- Pt 100 temperature probe.
- Polished aluminium alloy surface plate to ensure for an effective vacuum seal.
- Shielded heating element.
- AISI 304 stainless steel outer casing.
- Vacuum pump connection at the back of the unit.
- Tempered glass bell jar with silicon gasket seal.
- Vacuum bleed valve.

### Control Panel
- Main switch.
- Push button temperature control.
- Digital temperature display.
- Analogue vacuum gauge.

### DIAPHRAGM PUMP FOR VACUUM AND PRESSURE “VACUM-PRES”
- Small bench top model.
- Quiet.
- Free of vibrations.
- Maximum working temperature 40 °C.

### Features
- Electronic temperature control and digit display.
- Pt 100 temperature probe.
- Polished aluminium alloy surface plate to ensure for an effective vacuum seal.
- Shielded heating element.
- AISI 304 stainless steel outer casing.
- Vacuum pump connection at the back of the unit.
- Tempered glass bell jar with silicon gasket seal.
- Vacuum bleed valve.

### Control Panel
- Main switch.
- Push button temperature control.
- Digital temperature display.
- Analogue vacuum gauge.

### Spare Parts
- Tempered glass bell 15 cm. high and 23 cm Ø
- Part No. 4000475
- Silicon gasket. Part No. 4000476

---

### Vacuum equipment, Accessories

#### VACUUM PUMP “VACUUM”
- Rotary pump with anti-return veins, complete with oil, suitable for general vacuum applications.
- Motor with over temperature cut-out and separate mains power switch.
- Recommended for the “Vaciotem” and “Vacuo-Temp”

#### Features
- Asbestos free vein-blades and connections.
- Push on nozzle inlet.
- Oil level indicator and forced lubrication.
- Oil vapour filter.
- Easy to use and effective.
- Vibration free.
- Noise level below (62 dB).
- Maximum working temperature: 60 °C.
- Portable.

### VACUUM DIAPHRAGM PUMP “VACUM-SEL”
- Small bench top model.
- Quiet.
- Free of vibrations.
- Maximum working temperature 40 °C.

#### Control Panel
- Main switch.
- Push button temperature control.
- Digital temperature display.
- Analogue vacuum gauge.

### VACUUM equipment, Accessories

#### DIAPHRAGM PUMP FOR VACUUM AND PRESSURE “VACUM-PRES”
- Small bench top model.
- Quiet.
- Free of vibrations.
- Maximum working temperature 40 °C.

#### Control Panel
- Main switch.
- Push button temperature control.
- Digital temperature display.
- Analogue vacuum gauge.
Incubation chamber ‘Boxcult’

FAN CONVECTION.
ADJUSTABLE TEMPERATURES FROM AMBIENT +5°C up to 57°C.
STABILITY: 0.5°C HOMOGENIETY: 3% OF WORKING TEMPERATURE.
SET ERROR: 2% OF THE WORKING TEMPERATURE. RESOLUTION 0.1°C.

SAFETY:
STANDARD EN 61.010. SAFETY TEMPERATURE LIMITER INCORPORATED.

Features
Built with of transparent methacrylate which allows the user to see inside the incubator during operation without having the need to open the door. 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 system ensures an even and rapid recovery of temperature. A 30 mm diameter port at the rear can be used to connect power to apparatus inside the chamber.
Supplied as an accessories, the removable base permits the Boxcult to be mounted on the Celmag stirrers and orbital shaker “Rotabit”, (described in the stirrer section.) The metallic top chamber includes the heating elements, air circulation fan and temperature control.

Control Panel
Main switch.
Digital electronic temperature control.

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 two removable shelves. Useful dimensions 43 cm length and 41 cm width.
Part No. 1000973

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

For easy handling, better results and less maintenance all stirrer and shaker control devices are installed outside the incubation chamber.

Magnetic stirrer “Celmag L” fitted with the incubation chamber “Boxcult”.
Orbital shaker Rotabit, fitted with an incubation chamber Boxcult.

Part No. Capacity Height/Width/Depth Height/Width/Depth Power Weight
3000957 110 50 47 47 61 51 51 220 11

Supplied as accessories.

Online: www.cometacientifica.com
Bacteriological incubators ‘Incubat’

NATURAL CONVECTION. TEMPERATURE THERMOSTAT CONTROL WITH ANALOGUE THERMOMETER.
ADJUSTABLE TEMPERATURES FROM AMBIENT +5 °C up to 80 °C. STABILITY: ±0.5 °C.
HOMOGENEITY: ±2 % OF THE WORKING TEMPERATURE. INTERNAL GLASS DOOR.

CONTROL PANEL OPTIONS, SAFETY SYSTEMS AND CONFORMITY TO STANDARDS, SEE GENERAL FEATURES.

Performance graph of temperature and time.
- Set at 80 °C: 1 hr 54’.
- Set at 56 °C: 1 hr 46’.
- Set at 37 °C: 1 hr 18’.

Standard equipment
2 shelves and 4 guides.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity</th>
<th>H/W/D (internal) cm</th>
<th>H/W/D (external) cm</th>
<th>Shelf Positions</th>
<th>Power W</th>
<th>Wt Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000205</td>
<td>19</td>
<td>30 25 25</td>
<td>50 60 44</td>
<td>5</td>
<td>150</td>
<td>26</td>
</tr>
<tr>
<td>2000206</td>
<td>36</td>
<td>40 30 30</td>
<td>60 65 49</td>
<td>7</td>
<td>225</td>
<td>36</td>
</tr>
<tr>
<td>2000207</td>
<td>80</td>
<td>50 40 40</td>
<td>70 74 59</td>
<td>8</td>
<td>300</td>
<td>54</td>
</tr>
<tr>
<td>2000994</td>
<td>150</td>
<td>50 60 50</td>
<td>70 95 68</td>
<td>8</td>
<td>500</td>
<td>71</td>
</tr>
</tbody>
</table>

Accessories

- Shelves and guides.

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

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

Part No. 2000002 Timer switch of 0-12 hours.
Part No. 2000005 Safety thermostat (adjustable temperature).
Part No. 2000009 Programmer, 24 hours.

Accessories

Online: www.cometacientifica.com
Digital bacteriological incubators ‘Incudigit’

NATURAL CONVECTION. DIGITAL CONTROL AND DISPLAY OF TEMPERATURE AND TIME.
ADJUSTABLE TEMPERATURE FROM AMBIENT +5 °C up to 80 °C. STABILITY: ±0.25 °C. INTERNAL GLASS DOOR.
HOMOGENEITY: ±2 % OF THE WORKING TEMPERATURE. SET ERROR: ±2 % OF THE WORKING TEMPERATURE.
RESOLUTION: 1 °C.

CONTROL PANEL OPTIONS, SAFETY SYSTEMS AND CONFORMITY TO STANDARDS, SEE GENERAL FEATURES..

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

Standard equipment
2 shelves and 4 guides.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity L</th>
<th>H/W/D (internal) cm</th>
<th>H/W/D (external) cm</th>
<th>Shelf Positions</th>
<th>Power W</th>
<th>Wt Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001246</td>
<td>19</td>
<td>30/25/25</td>
<td>50/60/44</td>
<td>5</td>
<td>150</td>
<td>26</td>
</tr>
<tr>
<td>2001247</td>
<td>36</td>
<td>40/30/30</td>
<td>60/65/49</td>
<td>7</td>
<td>225</td>
<td>36</td>
</tr>
<tr>
<td>2001248</td>
<td>80</td>
<td>50/40/40</td>
<td>70/74/59</td>
<td>8</td>
<td>300</td>
<td>54</td>
</tr>
<tr>
<td>2001249</td>
<td>150</td>
<td>50/60/50</td>
<td>70/95/68</td>
<td>8</td>
<td>500</td>
<td>71</td>
</tr>
</tbody>
</table>

Part No. 2001246 2001247 2001248 2001249
Guides (2) (Set) 2000011 2000012 2000013 2000015
Shelves 2000021 2000022 2000023 2000025

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

Online: www.cometacientifica.com
Digital bacteriological and cell culture incubators ‘Incubig’

NATURAL CONVECTION. DIGITAL CONTROL AND DISPLAY OF TEMPERATURE AND TIME. ADJUSTABLE TEMPERATURE FROM AMBIENT+5 °C up to 80 °C.
STABILITY: ±0.25 °C. HOMOGENEITY: ±2 % OF THE WORKING TEMPERATURE.
SET ERROR: ±2 % OF THE WORKING TEMPERATURE. RESOLUTION: 0.1 °C.
INTERNAL HARDENED GLASS DOOR.

SAFETY:
OVER TEMPERATURE CUT OUT INCORPORATED ACCORDING TO THE EN 61010 STANDARD.
DIN 12880.3.1 STANDARD. THIS STANDARD IS MET BY INCORPORATING A SAFETY THERMOSTAT AS AN ACCESSORY.

Features

Digital control and display of temperature and time.
Large surface area heating elements
Inner chamber made of AISI 304 stainless steel
Double door, interior door of hardened glass that allows the user to see the interior of the chamber without opening the door and effecting the chamber temperature.
Variable air vent
Epoxy covered external case.

Standard equipment

For Part No. 2000237, 2 shelves and 4 guides.
For Part No. 2003711 and 2002471, 2 shelves.

Performance graph of temperature and time.

- Set at 80 °C: 1 hr 15'.
- Set at 56 °C: 1 hr 10'.
- Set at 37 °C: 54'.

Note: The optimum temperature homogeniety was achieved with a reasonable distribution of goods that did not surpass 70 % of the volume of the inner chamber.

Capacity up to 720 litres

Online: www.cometacentífica.com
Control Panel

1. Mains switch with "ON" indicator.
2. Temperature mode indicator.
3. Time mode indicator.
4. Display for temperature and time.
5. Operating, "RUN" 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 Start / Stop.
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.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Type</th>
<th>Capacity</th>
<th>H/W/D (internal) cm</th>
<th>H/W/D (external) cm</th>
<th>Shelf Positions</th>
<th>Power W</th>
<th>Wt Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000237</td>
<td>1 door</td>
<td>288</td>
<td>80</td>
<td>60</td>
<td>97</td>
<td>91</td>
<td>76</td>
</tr>
<tr>
<td>2003711</td>
<td>cabinet</td>
<td>400</td>
<td>100</td>
<td>80</td>
<td>130</td>
<td>114</td>
<td>75</td>
</tr>
<tr>
<td>2002471</td>
<td>cabinet</td>
<td>720</td>
<td>120</td>
<td>100</td>
<td>152</td>
<td>134</td>
<td>85</td>
</tr>
</tbody>
</table>

Accessories

All accessories need to be factory fitted.

Part No. 2000005 Safety thermostat which disconnects the heating in case the incubator’s own thermostat fails, thus protecting the contents of the incubator (conforms to DIN12.880 class 3.1).

Part No. 2000019 Graphic register for temperature with continuous paper roll.

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

Accessories

Shelves and guides.

<table>
<thead>
<tr>
<th>Incubator Part No.</th>
<th>2000237</th>
<th>2003711</th>
<th>2002471</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 shelf requires two guides i.e. one set.
Precise low temperature incubator ‘Prebatem’

FAN ASSISTED CIRCULATION.
ADJUSTABLE TEMPERATURES FROM 0 °C up to 50 °C.
SEMICONDUCTOR COOLING SYSTEM
SILENT- STABLE-VIBRATION FREE- VERY PRECISE-LOW POWER CONSUMPTION
STABILITY: ±0.05 °C. HOMOGENEITY: ±0.5 % OF THE WORKING TEMPERATURE.
SET ERROR: ±0.25 % OF THE WORKING TEMPERATURE: 0.1 °C.

CONFORMS TO THE TEMPERATURE STABILITY AND HOMOGENEITY OF THE DIN 50011 STANDARD.

Applications
Biotechnology, Bacteriology, Plasma fractionation, Biology, Enzymatic test, Phytopharmacy, Cosmetics, Water analysis, Botany and Agricultural research

Features
1. Digital control and display of temperature with pre-set programmable run time.
2. Inner chamber and elements made of AISI 304 stainless steel.
3. Premixing temperature chamber.
4. Semiconductor- static radiator for heating and cooling.
5. Low exterior temperature due to excellent thermal insulation.
6. Turbo fan to circulate the air.
7. Diagram showing the air flow from the premixing chamber, where the semiconductor cooling / heating is located.
8. Independent insulated control box .
10. Shelves of Stainless steel
11. Epoxy coated outer case.
12. Adjustable guide rail positions
13. Flexible silicon door gasket around the entrance of the chamber.
14. Excellent door seal and thermal insulator. The floating inner door forms a hermetic seal every time.
15. Adjustable pressure door lock.

Control Panel
Main switch.
Mains indicator lamp.
Digital control and display of temperature.
Performance graph of temperature and time.
- Set at 50 °C: 40'.
- Set at 0 °C: 48'.

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

Standard equipment
2 shelves and 4 guides.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity L</th>
<th>Height/Width/Depth (internal) cm</th>
<th>Height/Width/Depth (external) cm</th>
<th>Shelf Positions</th>
<th>Power W/hr. at 5 °C</th>
<th>Power W/hr. at 40 °C</th>
<th>Power W</th>
<th>Weight Kg</th>
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<tr>
<td>2000961</td>
<td>36</td>
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<td>8</td>
<td>90</td>
<td>60</td>
<td>310</td>
<td>94</td>
</tr>
</tbody>
</table>

Accessories
The following accessories need to be factory fitted.

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

- 24 hour programmer with continuous on/off cycling of periods up to every 15 minutes.
  Part No. 2000009

Accessories
Shelves and guides.

- Guides (2) (Set) 2000012 2000013 2000015

- Shelves 2000022 2000023 2000025

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

Online: www.cometacentífica.com
**CO₂ Incubators for anaerobic cell and tissue cultures. ‘Incubator CO₂’**

**Features**

External case of steel coated with a thermally insulated epoxy.

The chamber is made of stainless oxide proof steel with shelves that are easy to remove and clean. Two doors; one interior hardened glass with silicon gasket and an exterior steel door with magnetic seal. To prevent condensation on the glass door the steel door is maintained at the appropriate temperature. Heating elements are homogeneously distributed around the outside of the chamber. Smooth door action, to prevent jolts or vibrations disturbing the contents of the incubator.

The CO₂ is administered through a metal tube of 6 mm Ø x 4 mm at the back of the unit.

**Temperature monitor and control**

Electronic temperature control and display, adjustable from ambient +5 °C to 50 °C, with pre-select sensitive potentiometer control to 0.1 °C. A Pt 100 thermo-resistance probe monitors the actual temperature. A second digital temperature control unit and probe act as a safety thermostat protecting sensitive samples against over temperature. Conforms the DIN 12880 class 3.1 standard.

**CO₂ Control and regulation**

The CO₂ can be pre-set via a digital controller to within 0.1 %. To maintain an accurate CO₂ level within the unit a thermal conductivity CO₂ analyser is incorporated inside the chamber. After opening and closing the door the CO₂ % is re-established, maintaining a low consumption of CO₂. If the door is opened a micro switch in the glass door impedes the flow of CO₂. An easy to change micro filter of 0.03 microns is incorporated into the CO₂ gas line.

A user adjustable ventilator controls the rate of gas exchange within the chamber.

**Humidity control**

The humidity level within the chamber is maintained at a level of 98% (relative humidity). The unit has a graduated scale of 0 to 20 %. Relative humidity is produced by the evaporation of water that is loaded at the bottom of the chamber.

**Standard equipment**

2 shelves for the **Part No. 4000628** and 4 shelves for the **Part No. 4000602**.

**Control Panel**

1. Main switch.
2. CO₂ switch.
3. CO₂ indicator lamp.
4. Ventilation switch.
5. Ventilation indicator lamp.
6. CO₂ flow indicator lamp.
7. % of CO₂ indicator.
8. Test CO₂ flow button.
9. Adjust CO₂ %.
10. Adjust ZERO CO₂.
11. Alarm indicator lamp.
12. Display alarm, set temperature
15. Temperature display.
16. Test temperature push button.
17. OFF SET temperature control.
18. Temperature control.

**Accessory**

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**

![Image of CO₂ Incubators for anaerobic cell and tissue cultures. ‘Incubator CO₂’](image-url)

**Part No.** | **Capacity** | **H/W/D (internal) cm** | **H/W/D (external) cm** | **Shelf Positions** | **Power W** | **Wt Kg**
--- | --- | --- | --- | --- | --- | ---
4000628 | 136 | 62 | 44 | 50 | 100 | 60 | 6 | 550 | 70
4000602 | 205 | 57 | 60 | 60 | 78 | 98 | 70 | 6 | 700 | 80

Online: [www.cometacientifica.com](http://www.cometacientifica.com)
Precise refrigerated incubators “Hotcold”

HOTCOLD S - M - L......ADJUSTABLE TEMPERATURES FROM 0 °C up to 60 °C.
HOTCOLD UM - UL......ADJUSTABLE TEMPERATURES FROM -10 °C up to 60 °C.
HOTCOLD GL.............ADJUSTABLE TEMPERATURES FROM 0 °C up to 60 °C.
WITH INTERIOR LIGHTING...........FROM 10 °C up to 60 °C.

NOTE:
Power points within the unit or by using the two external ports of the HOTCOLD incubators allow for the use of non heating shakers and BOD equipment to be used inside the unit. See chapter on stirrers and mixers.

SAFETY
ADJUSTABLE OVER TEMPERATURE CUT OUT INCORPORATED IN CASE THE SYSTEM OVER TEMPERATURE FAILS, MANUAL RESET, CONFORMS TO THE DIN 12880.2 STANDARD.

PRECISION TABLE
STABILITY:..............................± 0.5 °C
HOMOGENIETY:..........................±1.5 °C
SET ERROR:..............................±0.5 °C
RESOLUTION:............................0.1 °C

Applications
Applications BOD tests, plasma fractions, cosmetics, botany, pharmacy, industry, agriculture, bacteriology, biotechnology, enzyme testing, serum studies, BOD and research.

Features
Epoxy-coated outer casing.
Magnetic door seal.
Strong, easy to clean inner chamber of moulded polystyrene.

Two height-adjustable shelves.
Hermetically-sealed compressor installed on an anti-vibration mounting with ventilated evaporator, regulating valve and condenser.
Two turbo circulation fans within the unit.
Two power points within the unit for operating shakers or mixers.
Two holes for entry ports one on each side.
Adjustable level anti vibration base mounts

Temperature control
Digital temperature selection and display.
Resolution: 0.1 °C.

Online: www.cometacientifica.com
Refrigerated incubators ‘Hotcold’ S-M and L

ADJUSTABLE TEMPERATURES FROM 0 °C up to 60 °C.

Control panel

1. Main switch with indicator lamp.
2. Compressor switch with indicator lamp.
3. Interior light switch with indicator lamp.

Digital temperature control, comprising of:
4. Temperature control.
5. Push button showing the selected temperature.
6. Fine adjustment potentiometer control.
7. Temperature display,
8. Safety thermostat indicator lamp, disconnecting the oven in the event of over temperature above the set safety temperature level.

Inner chamber:
9. Two power points.
10. Two air circulating fans. (Model S, one fan only)
11. Two holes for external ports one on each side for external connections.

Graph of temperature and time.

Note: The optimum temperature homogeneity was achieved with a reasonable distribution of goods that did not surpass 70% of the volume of the inner chamber.

<table>
<thead>
<tr>
<th>Hotcold</th>
<th>Part No.</th>
<th>Capacity</th>
<th>Height/Width/Depth (internal) cm</th>
<th>Height/Width/Depth (external) cm</th>
<th>Power W</th>
<th>Compressor HP</th>
<th>Weight Kg.</th>
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<tr>
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<td>4000667</td>
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<td>57 42 42</td>
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<td>410</td>
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<td>M*</td>
<td>4000668*</td>
<td>200</td>
<td>85 50 45</td>
<td>140 60 73</td>
<td>670</td>
<td>1/6</td>
<td>90</td>
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<tr>
<td>L</td>
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<td>108 60 52</td>
<td>165 72 86</td>
<td>1100</td>
<td>3/8</td>
<td>130</td>
</tr>
</tbody>
</table>

Supplied with two shelves. *Accessory: duplex drawer and storage rack for 0.5, 1.5 and 2 ml tubes. See Refrigeration section.
Refrigerated incubators ‘Hotcold UM-UL’

Adjustable temperatures from -10 °C up to 60 °C.

Two temperature set points.
Heater in the door seal.

Graph of temperature-time.

Control panel

1. Main switch with indicator lamp.
2. Compressor switch with indicator lamp.
3. Interior lighting switch with indicator lamp.
4. Mains failure indicator lamp and reset.

Digital control for two temperature set points comprising of:
5. and 5-A. Two temperature set point controls.
6. and 6-A. Two temperature push button showing the selected temperatures.
7. Fine temperature adjustment potentiometer.
8. Temperature display.
9. Adjustable safety thermostat indicator lamp,
disconnecting the oven in the event of the unit going over the set safety temperature.
10. Two-Temperature thermal cycler programmable timer (Choice: 24 hour or 7 day timer).
11. Temperature chart recorder.
(Model dependent.).

Inner chamber

12. Two power Points.
13. Air circulating fans.
14. Two holes for external ports for connecting external devices.

<table>
<thead>
<tr>
<th>Hotcold</th>
<th>Part No.</th>
<th>Capacity</th>
<th>Programmer</th>
<th>Chart</th>
<th>Height/Width/Depth (internal) cm</th>
<th>Height/Width/Depth (external) cm</th>
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<th>Comp. HP</th>
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<td>95</td>
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<td>1/5</td>
<td>95</td>
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<tr>
<td>UM*</td>
<td>4000693*</td>
<td>200</td>
<td>7 days</td>
<td>-</td>
<td>85 50 45</td>
<td>140 60 73</td>
<td>820</td>
<td>1/5</td>
<td>95</td>
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<tr>
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<td>4000694*</td>
<td>200</td>
<td>7 days</td>
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<td>85 50 45</td>
<td>140 60 73</td>
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<td>24 hours</td>
<td>-</td>
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<td>165 72 86</td>
<td>1300</td>
<td>3/8</td>
<td>135</td>
</tr>
</tbody>
</table>

Supplied with two shelves. *Accessory: duplex drawer and storage rack for 0.5, 1.5 and 2 ml tubes. See Refrigerated section.

Online: www.cometacientifica.com

Ovens, Incubators and Furnaces
Refrigerated incubators for plants ‘Hotcold GL’

ADJUSTABLE TEMPERATURES FROM 0 °C up to 60 °C.
WITH ILLUMINATION, ADJUSTABLE TEMPERATURES FROM 10 °C up to 60 °C.

Two temperature set points. Illumination of 11000 lux to 6500 °K
Hourly thermal cycler. Hourly illumination cycling.
Automatic switch off of the illumination when the door is opened.
Illumination:
6 high intensity lamps, air vent within the illuminate area of the unit.

Control panel

1. Main switch with indicator lamp.
2. Compressor switch with indicator lamp.
3. Interior lighting switch with indicator lamp.

Digital control for two temperature set points comprising of:
4. and 4-A. Double temperature set point controls.
5. and 5-A. Double temperature push buttons, shows the selected temperatures.
6. Fine temperature adjustment potentiometer.
7. Adjustable safety thermostat indicator lamp, disconnecting the incubator in the event of the unit going over the set safety temperature.
8. Double -Temperature thermal cycler programmable timer (Choice: 24 hour or 7 day timer)
9. Temperature chart recorder (Model dependent).
10. Switch with indicator lamp of the internal illumination.
11. Illumination selector with display for 50 or 100%
12. Illumination cycler, day- night (choice 24 hour or 7 day programmer)
13. Power socket switch with indicator lamp for internal power points.

Inner chamber:
14. Two power Points
15. Air circulating fans.
16. Two holes for external ports for connecting external devices.

<table>
<thead>
<tr>
<th>Hotcold</th>
<th>Part No.</th>
<th>Capacity (l)</th>
<th>Programmer</th>
<th>Chart</th>
<th>Height/Width/Depth (internal) cm</th>
<th>Height/Width/Depth (external) cm</th>
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<th>Comp. Kg</th>
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<td>108 60 52</td>
<td>165 72 86</td>
<td>1400</td>
<td>3/8 140</td>
</tr>
</tbody>
</table>

Note: The optimum temperature homogenity was achieved with a reasonable distribution of goods that did not surpass 70% of the volume of the inner chamber.

Supplied with two shelves. Walk-in Growth Chambers also available upon request.

Online: www.cometacientifica.com

Ovens, Incubators and Furnaces
Electric muffle furnaces ‘Select-Horn’

ADJUSTABLE TEMPERATURE UP TO 1150 °C.
SET ERROR: ±1 °C OF THE VALUE SELECTED.
RESOLUTION: 1 DIGIT.

Applications
Incineration processing, drying, degradation, re-heating, thermal treatments.

Features
Inner chamber constructed from high quality light weight refractory plates with excellent thermal conductivity and a high alumina content. (No asbestos or iron oxide content).
Evenly distributed exceptionally long life heating elements: high melting point, annealed under a high frequency.
Excellent “Fibro-ceramic” low density, low thermal conductivity insulation.
Low consumption with maximum performance.
Rapid temperature recovery after the door has been opened.
Flap door with easily replaceable components.

Safety
If the probe breaks a temperature probe detector cuts the power off to the furnace.
Power is cut off to the heating element when the door is opened.
Thermally insulated door that also acts as a support while removing items from the furnace.

Control panel
Main switch.
Mains indicator lamp.
Digital temperature control and display equipped with a K-type probe.

P.I.D. control system which makes for a very stable and responsive temperature within the furnace.
Simultaneously shows the process and set value temperature (4 digits).

Graph of temperature-time.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Capacity</th>
<th>Height/Width/Depth (internal) cm</th>
<th>Height/Width/Depth (external) cm</th>
<th>Power W</th>
<th>Weight Kg</th>
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<td>9</td>
<td>15 20 30</td>
<td>58 59 65</td>
<td>3000</td>
<td>70</td>
</tr>
</tbody>
</table>

Supplied with floor shelf made of non deforming special stainless steel.

Accessories
(Need to be factory fitted.)
Programmable microprocessor.
10 programs of 10 steps.
Programmable from 1 minute to 99 hours.
Programs can be repeated from: 0 to 99 times or cyclically.
Precision: ±0.25 %.
Part No. 2001227

External outlet pipe. Placed at the rear of the furnace for gas and vapours leak (1).
Part No. 2000703

Microswitch which cuts the heating off when opening the door (2). (Supplied with the apparatus).

Online:www.cometacientifica.com

Ovens, Incubators and Furnaces 215
Muffle Furnace ‘Labotherm®’ series LH
TEMPERATURE UPTO 1400 °C. CAPACITIES: 15, 30, 60 & 120 LITRES.

Features
Rapid heating with exceptional temperature uniformity.
Made of refractory bricks and porous refractory plates.
Heating elements distributed throughout the oven.
Insulated door opens out and while open the elements are switched off.
An extraction tube to form can be connected to a fan extractor at the back of the unit to form an air exchange system for ashing applications is placed at the back of the unit.
Heating element made of wound (PtRh-Pt), tipo S.

Microprocessor control with 9 program memory, each with 18 segments individually programable.
A single external step control can activate the extractor during the function of the furnace.
Digital LCD display of 4 lines of 20 characters.
Automatic programmable timer for start and stop sequence.
Programmer also indicated date and time
Interface to an external computer controller RS-485

<table>
<thead>
<tr>
<th></th>
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<td>LH 120/14</td>
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<td>50</td>
<td>50</td>
<td>142</td>
<td>80</td>
<td>70</td>
</tr>
</tbody>
</table>

Graph Temperature / Time T max 1400 °C.

MODEL “SERIES L-C6”

S SERIES L-C6 TEMPERATURE TO 1100 °C. SERIES L-C6 CAPACITIES OF 3, 5 & 9 LITRES.

Features
Galvanised painted steel exterior
Refractory brick interior with fibre insulation
Lightweight design
Fast heating and cooling.
Window in the door to see the sample without having to open the door.
Extraction tube at the back of the unit. This tube can be connected to the optional extractor unit.
Heater elements are mounted within refractory plates to reduce damage and easy repair.
Two side heated in the (L3/C6) or roof & floor (L5/C6, L9/C6). External controller mounted within the unit with two functions.
Breaker if the unit exceeds 10 Amps.Controller C6 Easy to use control with push button keys
Set time and temperature in 1 °C step to 1 minute.
Heating temperature 1 to a 5000 minutes; infinite time control.
(PID) temperature control, Factory preset. The unit can be readjusted by the user.
Safety feature stop, if the temperature goes over the set limit. Thermocouple Type K or Type S.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<td>L3-C6</td>
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<td>L5-C6</td>
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<td>17</td>
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<td>25</td>
<td>57</td>
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</tbody>
</table>
Ovens, Incubators and Furnaces

MODEL "SERIES L-S27"

The L-S27 construction is the same as the L-C6 series except that the controller is replaced with a programmable microprocessor control. Control and precision better than 3 °C. Set program by 1°C and 1 minute steps. Memory for 9 programs of 4 ramp rates and 4 time intervals. Alternatively 3 programs of 24 steps. Acoustic audible signal programmable. Standard 220-230v 10 Amp system. A ventilation tube that can be connected an extractor unit is placed at the back. Start date time programmable

Thermocouple type S. Safety microswitch in the door when opened switches off heat from the elements.

High Temperature Furnace ‘Supertherm’

Series HT-16 & HT-17

SERIES HT-16 TEMPERATURES TO 1600 °C. SERIES HT-17 TEMPERATURE TO 1750 °C. CAPACITY: 4, 8, 12, 16 & 32 LITRES.

Features

Fast heat up and cool down.
Swing back door
Ventilated table support.
Molibdenium heating elements
System control to (±2 °C).
Base Unit height 78 cm.
Optional: Printer interface
Programmer for temperature and time
Start Stop function

Optional programmers.

<table>
<thead>
<tr>
<th>Model</th>
<th>Part No.</th>
<th>Temp. °C</th>
<th>Capacity L</th>
<th>Time to Max temp. Minutes</th>
<th>a / b / c (interior cm)</th>
<th>A / B / C (exterior cm)</th>
<th>Power Maximum</th>
<th>Mains</th>
<th>Wt. Kg</th>
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<td>25</td>
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<td>1 x 380 V~</td>
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<td>200 250 250</td>
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<td>25</td>
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Accessories

Extraction unit with fan to connect to the extraction tube. Power: 30 W. Part No. 2253401

Request a full brochure of industrial models.