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*"The key to quality is found in the personal commitment of each and every one within a company and by the management taking the lead."
Eugenio d'Ors*



LABORATORY OVENS AND INCUBATORS

Leading edge technology. Maximum Precision.



Drying and sterilization ovens:

Drying: For all drying processes of diverse laboratory material or glass material in general, printed circuits, granule and powder, etc.

Sterilization: They guarantee microorganisms destruction, either pathogen ones or not, which will be over or inside the material. They allow sterilization of powder and non-volatile viscous substances. For a good sterilization, a temperature between 160 °C and 180 °C and 2 hours exposition is usually required.

Vacuum drying ovens:

They are developed for applications of thermal and drying treatments of heat-sensitive products.

Bacteriological culture ovens:

For microorganisms or culture incubation in clinical diagnosis, in sanitary or nutritious industry. The samples are preserved at a determined temperature and period of time.

Cooled low temperature ovens:

For microorganisms or culture incubation, in clinical diagnosis, in sanitary or nutritious industry. The samples are preserved at a determined temperature and period of time.

Anaerobic cell and tissue cultures for CO₂ ovens:

Essential element in laboratories for research, cell biology, molecular biology, different cancer sorts and general pharmaceutical laboratories.

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



QUICK OVERVIEW

MODEL RANGE	MODELS	CONTROL	CAPACITY					Safety	RS-232
			2.5 litres	19 litres					
STERILIZERS POUPEL									
100 ... 250 °C	DRYTIME	ANALOGUE	2000911	-				YES	-
60 ... 250 °C	DRYTERM	ANALOGUE	-	2000787				YES	-
GLASS DRYING									
			126 litres						
40 ... 170 °C	DRYGLASS	ANALOGUE	2000381					YES	-
CONVECTION NATURAL									
			19 litres	36 litres	52 litres	80 litres	150 litres		
40 ... 250 °C	CONTERM	ANALOGUE	2000208	2000209	2000200	2000210	2000201	YES	-
Ambient+5 ... 250 °C	DIGITHEAT	DIGITAL μ	2001241	2001242	2001243	2001244	2001245	YES	YES
FORCED AIR, FAN CONVECTION BENCH TOP									
			33 litres	47 litres	76 litres	145 litres			
Ambient+5 ... 250 °C	DIGITRONIC	DIGITAL μ		2005131	2005151	2005141	2005161	YES	YES
Ambient+5 ... 250 °C	DIGITRONIC glass door	DIGITAL μ		2005132	2005152	2005142	2005162	YES	YES
FORCED AIR, FAN CONVECTION FLOOR STANDING									
			216 litres	288 litres	400 litres	720 litres			
Ambient+5 ... 250 °C	DRYBIG 230/400V III PHASES	DIGITAL μ	2002961	2002971	2003721	2003741		YES	YES
Ambient+5 ... 250 °C	DRYBIG 230V I PHASE	DIGITAL μ	2002962	2002972	-	-		YES	YES
HIGH TEMPERATURE									
			80 litres						
60 ... 400 °C	HIGHTEMP 230/400V III PHASES	DIGITAL μ	2001406					YES	-
VACUUM OVEN									
			3 litres	47 litres					
35 ... 200 °C	VACIOTEM T	DIGITAL μ	-	4001489				YES	YES
35 ... 200 °C	VACIOTEM TV	DIGITAL μ	-	4001490				YES	YES
Ambient+5 ... 170 °C	VACUO-TEMP	DIGITAL	4000474					YES	-
DESICCATOR									
			55 litres						
			1001403					YES	-
INCUBATION CHAMBER									
			110 litres						
Ambient+5 ... 57 °C	BOXCULT	DIGITAL	3000957					YES	-
INCUBATORS BENCH TOP									
			19 litres	36 litres	52 litres	80 litres	150 litres		
Ambient+5 ... 80 °C	INCUBAT	ANALOGUE	2000205	2000206	2001615	2000207	2000994	YES	-
Ambient+5 ... 80 °C	INCUDIGIT	DIGITAL μ	2001246	2001247	2001616	2001248	2001249	YES	YES
INCUBATORS LARGE AND FLOOR STANDING									
			288 litres	400 litres	720 litres				
Ambient+5 ... 80 °C	INCUBIG	DIGITAL μ	2000237	2003711	2002471			YES	YES
LOW TEMPERATURE CABINETS									
			36 litres	80 litres	150 litres				
5 ... 60 °C	PREBATEM	DIGITAL μ	2000961	2000962	2001250			YES	YES
CO₂ INCUBATOR									
			150 litres						
Ambient+5 ... 50 °C	INCUBATOR CO ₂	DIGITAL μ			4002628			YES	YES
WITH REFRIGERATION									
			160 litres	319 litres	442 litres	600 litres			
+5 ... 65 °C	HOTCOLD-S	DIGITAL μ	2101618	-	-	-		YES	-
0 ... 50 °C	HOTCOLD A-B-C	DIGITAL μ	-	2101502	2101503	2101504		YES	YES
-10 ... 50 °C	HOTCOLD UB - UC	DIGITAL μ		-	2101505	2101506		YES	YES
5 ... 50 °C	HOTCOLD GL	DIGITAL μ	-	-	-	2101507		YES	YES
MUFFLE FURNACE									
			3,6 litres	9 litres					
Up to ... 1150 °C	SELECT-HORN	DIGITAL	2000366	2000367				YES	

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

Part No.	Capacity litres	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Power W	Weight Kg
2000911	2.5	5 30 16	17 40 32	430	8



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.

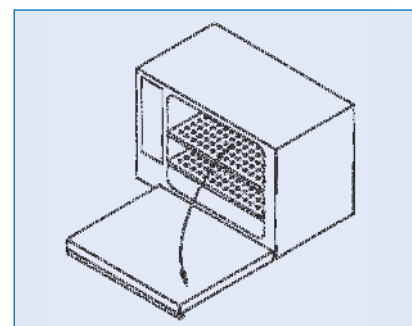
CONTROL PANEL

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

Part No.	Capacity litres	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Power W	Weight Kg
2000787	19	25 32 23	37 54 34	770	19





Glass drying oven "Dryglass"

FAN ASSISTED AIR CIRCULATION.
ADJUSTABLE TEMPERATURE FROM 40 °C TO 170 °C.

SAFETY:

EN.61012 STANDARD OVER TEMPERATURE SAFETY CUT OUT FITTED.
DIN 12.880.2 STANDARD (CLASS 2 AND 3.1) ADJUSTABLE SAFETY THERMOSTAT FITTED.

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

Part No.	Capacity litres	Height / Width / Depth (interior) cm			Height / Width / Depth (exterior) cm			Shelf Positions	Power W	Weight Kg
2000381	126	45	70	40	66	94	54	8	3000	65

ACCESSORIES

Accessories must be factory installed.



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

Part No.

2000081 Shelf guides x 2.

2000091 Shelf.

Each shelf requires 2 guides.



OVENS AND INCUBATORS SERIES 2000

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.

2000
serie

SAFETY:

STANDARD EN.61010. INCORPORATED FIXED OVER TEMPERATURE DEVICE .
STANDARD DIN 12880.2. (CLASS 2 AND 3.1)SAFETY THERMOSTAT CONTROLLER FITTED.

Leading edge technology



Detailed longitudinal cross section.

ORIGINAL SELECTA

Locking device on analogue temperature controls and security.



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.

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 in analogue temperature controls.
9. Adjustable guide and shelf positions.
10. Double seal around the chamber to provide a gentle but effective seal.
11. Floating spring door that adjusts the pressure and absorbs the thermal expansion.
12. Adjustable door pressure system closure.

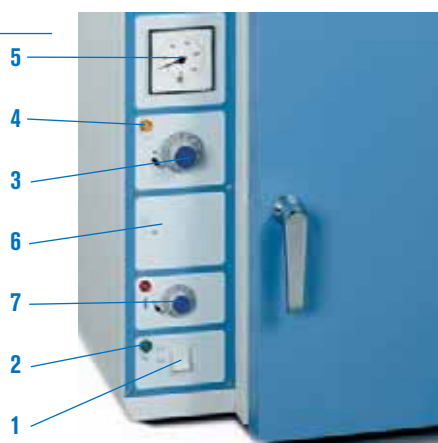
NOTE:

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

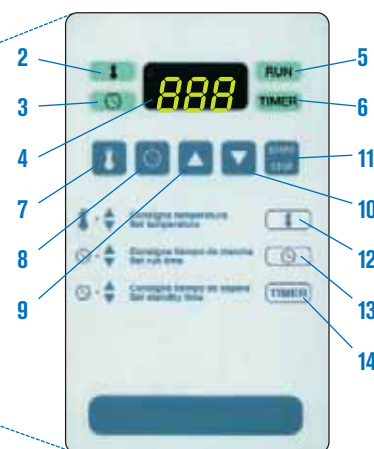
Models with Analogue control.

1. Mains switch.
2. "On" indicator lamp.
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 microprocessor control and digital display.

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.
15. RS-232 Interface output for a computer, printer or USB adapter.
16. Controllable safety thermostat (that disconnects power to the heater in case of a fault in microprocessor), manual reset and function signal lamp.



MODEL SUMMARY TABLE

Models	CONTERM	DIGITHEAT	DIGITRONIC	INCUBAT	INCUDIGIT
TYPE	Drying Oven	Drying Oven	Universal	Bacteriological Incubator	Bacteriological Incubator
CONTROL	Temperature	Temperature + time	Temperature + time	Temperature	Temperature + time
DISPLAY	Analogue	Digital	Digital	Analogue	Digital
AIR	Convection	Convection	Fan assisted	Convection	Convection
CIRCULATION	natural	natural		natural	natural
CAPACITY LITRES	19 - 36 - 52 - 80 - 150	19 - 36 - 52 - 80 - 150	33 - 47 - 76 - 145	19 - 36 - 52 - 80 - 150	19 - 36 - 52 - 80 - 150

ACCESSORIES



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

2000003 Timer switch 0-12 hours.
Suitable for **CONTERM** and **INCUBAT**.

2000009 24 hour programmer with continuous on/off cycling up to every 15 minutes.
Suitable for **CONTERM** and **INCUBAT**.



4120131 USB adapter model.
Pen-Drive included (Memory board) for data storage. Only for RS-232 outlet ovens.



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**.



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 down load to a printer or computer.
Suitable for **DIGITRONIC**.



DRYING AND STERILIZATION OVENS

2000
serie

Drying and sterilization ovens "Conterm"

NATURAL CONVECTION.
TEMPERATURE THERMOSTAT CONTROL WITH ANALOGUE THERMOMETER.
FOR ADJUSTABLE TEMPERATURES FROM 40 °C UP TO 250 °C.
STABILITY: ± 0.5 °C UP TO 100 °C. HOMOGENEITY: ± 1 °C UP TO 100 °C.

SAFETY:

STANDARD EN.61010. INCORPORATED FIXED OVER TEMPERATURE DEVICE .
STANDARD DIN 12880.2. (CLASS 2 AND 3.1) SAFETY THERMOSTAT CONTROLLER FITTED.

FEATURES, CONTROL PANEL, SAFETY, STANDARD AND ACCESSORIES (see pages 134 and 135).



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



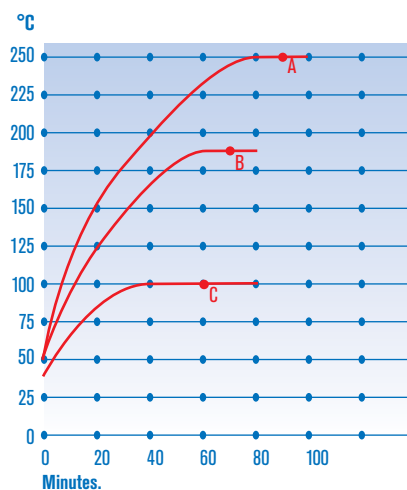
Model Conterm type Poupinel, Part No. 2000200 and 2000201.

STANDARD EQUIPMENT

2 shelves and 4 shelf guides.

MODELS

Part No.	Capacity litres	Height / Width / Depth (interior) cm			Height / Width / Depth (exterior) cm			Shelf Positions	Power W	Weight Kg
2000208	19	30	25	25	50	60	44	5	640	27
2000209	36	40	30	30	60	65	49	7	950	35
2000200	52	33	47	33	53	82	52	5	1075	44
2000210	80	50	40	40	70	74	59	8	1230	54
2000201	150	50	60	50	70	95	68	8	2150	76



Performance graph of temperature and time.

A. Set at 250 °C: 1 h 30'.

B. Set at 180 °C: 1 h 12'.

C. Set at 100 °C: 1 h.

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.

Oven Part No.	2000208	2000209	2000200	2000210	2000201
Guides set (2 units)	2000011	2000012	2000012	2000013	2000015
Shelves	2000021	2000022	2000024	2000023	2000025

Each shelves requires two guides (one set).



Drying and sterilization 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, UP TO 100 °C. HOMOGENEITY: ± 1 °C, UP TO 100 °C.
SET ERROR: ± 2 % OF THE WORKING TEMPERATURE. RESOLUTION: 1 °C.

2000
serie

SAFETY:

STANDARD EN.61010. INCORPORATED FIXED OVER TEMPERATURE DEVICE .
STANDARD DIN 12880.2. (CLASE 2 AND 3.1)CONTROLLABLE SAFETY THERMOSTAT FITTED.

Reaches working temperature with minimum delay

FEATURES, CONTROL PANEL, SAFETY, STANDARD AND ACCESSORIES (see pages 134 and 135).



Model Digitheat type Poupinel,
Part No. 2001243 and 2001245.



Model Digitheat, Part No. 2001241, 2001242 and 2001244.

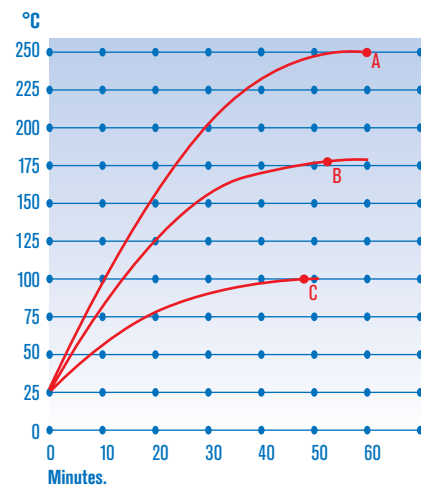
RS-232 Interface output for a computer, printer or USB adapter.

STANDARD EQUIPMENT

2 shelves and 4 shelf guides.

MODELS

Part No.	Capacity litres	Height / Width / Depth (interior) cm			Height / Width / Depth (exterior) cm			Shelf Positions	Power W	Weight Kg
2001241	19	30	25	25	50	60	44	5	600	24
2001242	36	40	30	30	60	65	49	7	900	35
2001243	52	33	47	33	53	82	52	5	1000	44
2001244	80	50	40	40	70	74	59	8	1200	59
2001245	150	50	60	50	70	95	68	8	2100	73



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



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

Accessories must be factory installed:



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.

SPARES

Shelves and guides.

Oven Part No.	2001241	2001242	2001243	2001244	2001245
Guides set (2 units)	2000011	2000012	2000012	2000013	2000015
Shelves	2000021	2000022	2000024	2000023	2000025

Each self requires two guides (one set).



Universal precision ovens "Digitronic"

FAN ASSISTED CIRCULATION.
 BACTERIOLOGICAL ASSAYS, DRYING PROCESSES AND STERILIZATION.
 MICROPROCESSOR CONTROL AND DIGITAL DISPLAY OF TEMPERATURE AND TIME.
 ADJUSTABLE TEMPERATURES FROM AMBIENT +5 °C UP TO 250 °C.
 STABILITY: ± 0.25 °C, UP TO 100 °C. HOMOGENEITY: ± 1 °C, UP TO 100 °C.
 SET ERROR: $\pm 2\%$ OF THE WORKING TEMPERATURE. RESOLUTION: 1 °C.

2000
 serie

SAFETY:

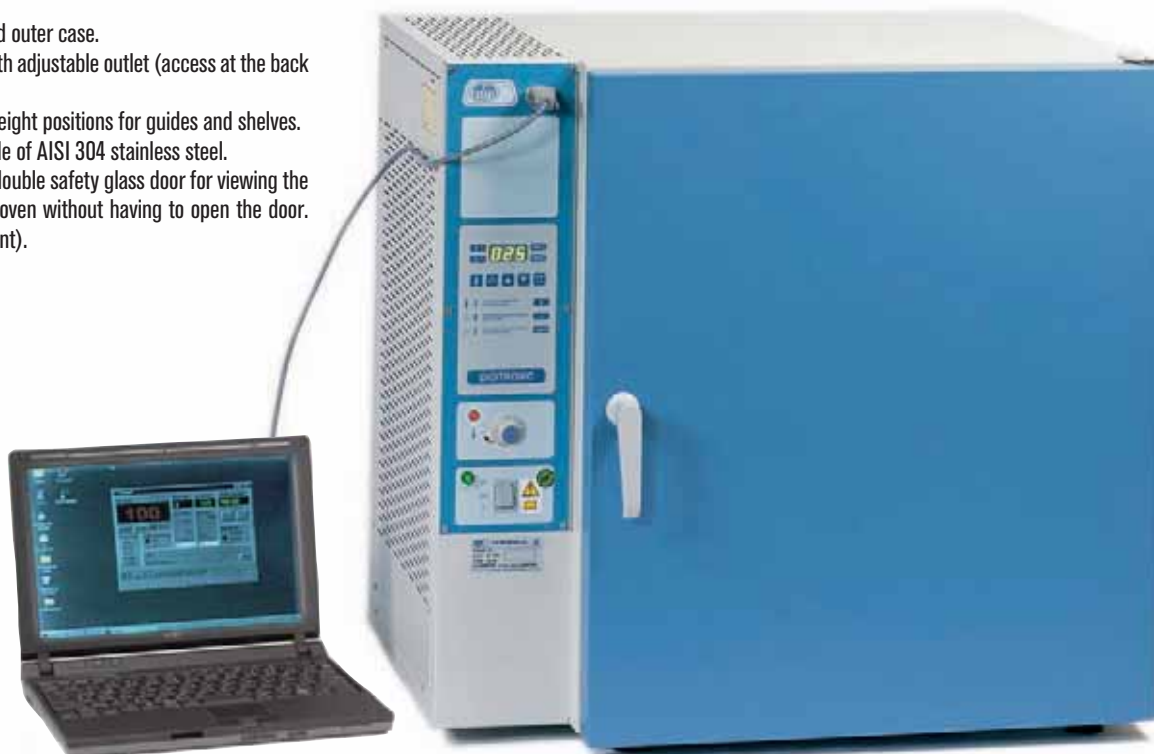
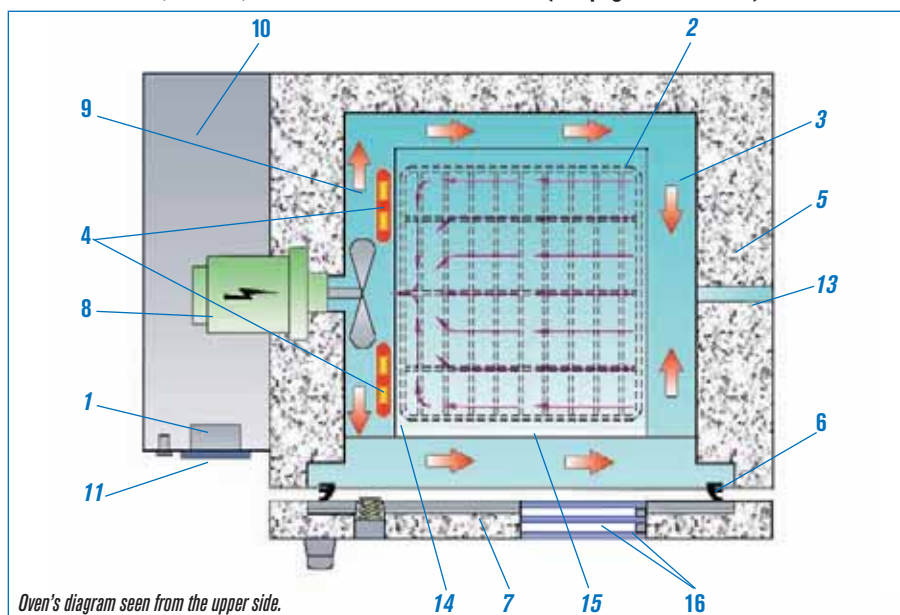
EN.61012 STANDARD OVER TEMPERATURE SAFETY CUT OUT FITTED.
 ADJUSTABLE OVER TEMPERATURE SAFETY THERMOSTAT DIN 12.880.2 (CLASS 2 AND 3.1) FITTED.

Multipurpose oven. Fast response and recuperation of temperature.

FEATURES

1. Microprocessor control with Digital display of temperature with pre-set programmable run time and pre-set temperature monitoring using 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. 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. Control panel with additional locations for mounting accessories.
12. Epoxy coated outer case.
13. Ventilator with adjustable outlet (access at the back of the unit).
14. Adjustable height positions for guides and shelves.
15. Shelves made of AISI 304 stainless steel.
16. 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 134 and 135).



RS-232 for data download to a printer or computer or USB adapter.

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



Model Digitronic type Poupinel, door with toughened double glass window Part No. 2005152 and 2005162.



Model Digitronic type Poupinel, Part No. 2005151 and 2005161.

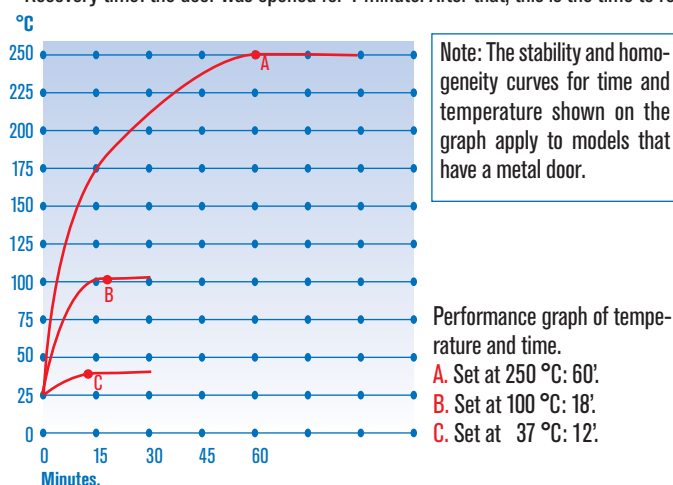
STANDARD EQUIPMENT

2 shelves and 4 shelf guides.

MODELS

Part No.	Capacity litres	Door Type	Heating rate to 100 °C minutes	Recovery time* minutes	Complete air exchange per hour	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Shelf Positions	Power W	Weight Kg
2005131	33	metal	15	7	16	40 28 30	60 65 55	7	1200	38
2005132	33	glass	15	7	16	40 28 30	60 65 55	7	1200	40
2005151	47	metal	16	7	16	33 45 32	53 81 58	5	1200	46
2005152	47	glass	16	7	16	33 45 32	53 81 58	5	1200	50
2005141	76	metal	17	9	14	50 38 40	70 75 65	8	1600	58
2005142	76	glass	17	9	14	50 38 40	70 75 65	8	1600	64
2005161	145	metal	17	10	12	50 58 50	70 95 72	8	2000	74
2005162	145	glass	17	10	12	50 58 50	70 95 72	8	2000	79

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



SPARES

Shelves and guides.

Oven Part No.	2005131 2005132	2005151 2005152	2005141 2005142	2005161 2005162
Guides (2) (Set)	2000012	2000033	2000013	2000015
Shelves	2000072	2000073	2000074	2000075

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

ACCESSORIES



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

Accessories that must be installed in the factory:



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.



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: ± 0.25 °C, UP TO 100 °C. HOMOGENEITY: ± 1.2 °C, UP TO 100 °C
SET ERROR : $\pm 2.5\%$ OF THE WORKING TEMPERATURE. RESOLUTION: 1 °C



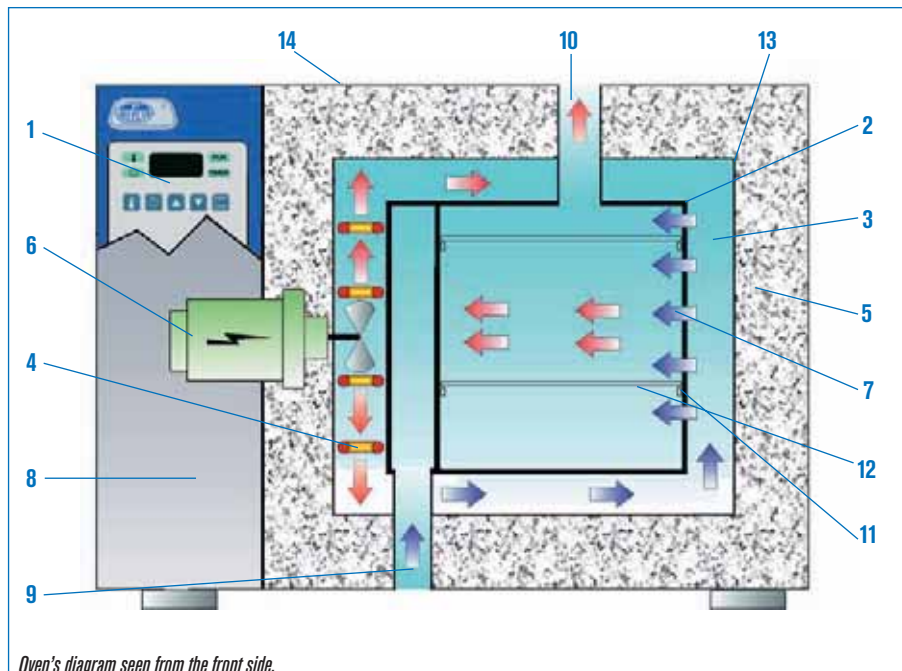
SAFETY:

STANDARD EN.61010. FIXED OVER TEMPERATURE DEVICE FITTED.
STANDARD DIN 12880.2. (CLASS 2 AND 3.1)ADJUSTABLE SAFETY THERMOSTAT FITTED.

Fast working and recovery temperature

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.
9. Air inlet.
10. Ventilator with adjustable outlet of 120 Ø mm.
11. Shelf guides.
12. Shelves made of AISI304 stainless steel.
13. Flexible silicon door gasket around the entrance of the chamber.
14. Epoxy coated outer case.



Oven's diagram seen from the front side.

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

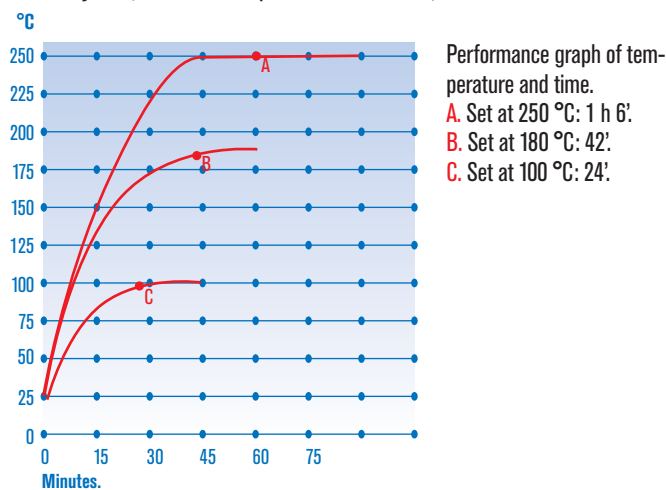
Part No.	Voltage	Capacity litres	Heating rate to reach 100 °C, minutes	Recovery time* minutes	Air exchanges per hour	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Number of shelf positions	Power W	Weight Kg
2002961	230 / 400 three phase	216	16	10	12	60 60 60	87 112 84	6	4000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

DOUBLE DOOR CABINET

2003721	230 / 400 three phase	400	18	13	6	100 80 50	128 132 74	10	5250	200
2003741	230 / 400 three phase	720	19	13	6	120 100 60	150 152 80	12	6000	264

Energy saving, three phase units are recommended.

*Recovery time, the door was opened for 60 seconds, time taken to recover to the set temperature of 100 °C.



SPARES

Shelves.

Oven Part No.	2002961/62	2002971/72	2003721	2003741
Shelves	2000062	2000062	2000063	2000064

ACCESSORIES



4120131 USB adapter model.

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

Accessories that must be installed in the factory :



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.



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, UP TO 300 °C. HOMOGENEITY: ± 3 °C, UP TO 300 °C
SET ERROR : ± 2 % OF THE WORKING TEMPERATURE.

SAFETY:

STANDARD DIN 12880.2 ADJUSTABLE OVER TEMPERATURE THERMOSTAT FITTED.

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 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

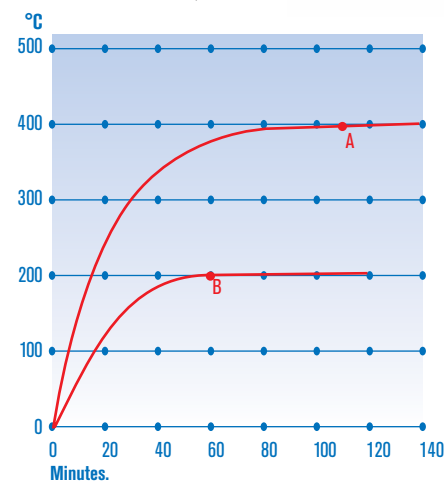
2 shelves made of AISI 310 stainless steel.

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 cuts off power to the heating elements in case of a controller fault. (standard to DIN 12.880 class 2).



Performance graph of temperature and time.

- A. Set at 400 °c: 1h 50'.
- B. Set at 200 °c: 1h.

ACCESSORIES. Shelves made of AISI 310 stainless steel. Part No. **2000071**

MODEL

Part No.	Voltage	Capacity litres	Height / Width / Depth (interior) cm shelf	Height / Width / Depth (exterior) cm	N° of shelf positions	Power W	Weight Kg
2001406	230 / 400 three phase	80	50 40 40	80 120 61	4	4000	75

ACCESSORIES

Accessories that must be installed in factory.



Part No. **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.

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.



Vacuum drying oven "Vaciotem-TV"

DIGITAL TEMPERATURE CONTROL, ELECTRONIC VACUUM PRESSURE DISPLAY AND TIMER.
 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 ACORDANCE WITH THE EN.61010 STANDARD.
 DIN 12880.2 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

- | | |
|--|---|
| <ol style="list-style-type: none"> 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. | <ol style="list-style-type: none"> 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. |
|--|---|

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



MODEL

Part No.	Vacuum Max.	Capacity litres	Ø / Depth (interior) cm	Height / Width / Depth (exterior) cm	Shelves	Power W	Weight Kg
4001490	10 ⁻² mm Hg	47	34 52	54 76 70	2	2000	73

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.

Accessories see page 145



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 ACORDANCE WITH THE EN.61010 STANDARD.
 DIN 12880.2 STANDARD ADJUSTABLE SAFETY THERMOSTAT FITTED.

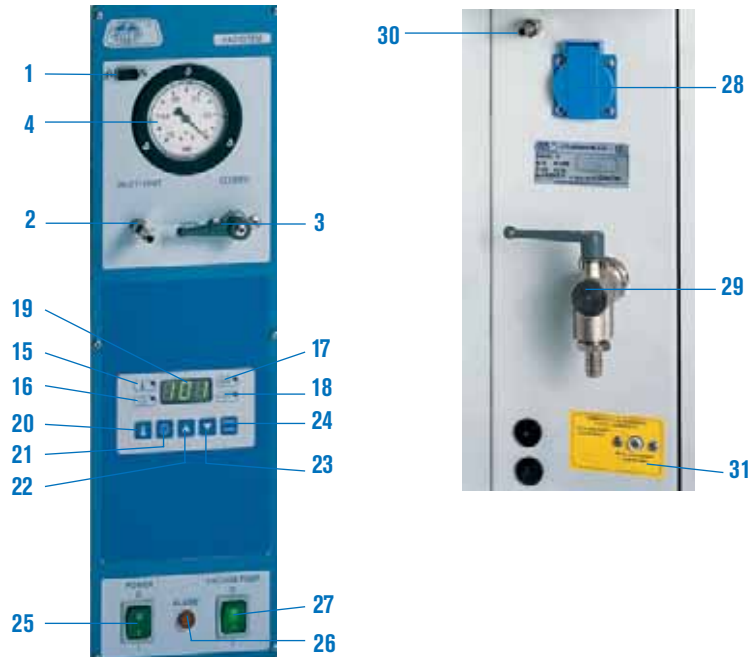
FEATURE

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

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

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.

Accessories see page 145

VACUUM EQUIPMENT ACCESSORIES FOR VACIOTEM-T AND VACIOTEM-TV



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 "VACIOTEM 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.

Shock absorber mounted.
Free from vibrations
Low noise level (62db).
Maximum working temperature 60 °C.
Portable, with lifting handle included.



MODEL

Part No.	Pump rate m ³ /h	Vacuum limit mbar	Height / Width / Depth (exterior) cm	r.p.m.	Power W	Weight Kg
5900621	1,8	0.06	25 32 15	1400	180	11

VACUUM PUMP CONNECTION KIT AND NON RETURN VALVE.

Description

Prevents the oil from the pump to penetrate the tube and consequentially to go into the vacuum oven chamber or vacuum desiccator.

Features

Made of an electro-valve and standard vacuum connections type KF DN16 calibre and switch cable that connects directly to the vacuum oven Part Nos. 4001489 and 4001490.

The vacuum pump is controlled via a Start/Stop switch from the control panel of the vacuum oven, model Vaciotem-T part No. 4001489 and automatically for Vaciotem-TV, part no.. 4001490.

Supplied with a high pressure rubber tube 8 x 15 mm Ø. 2 meters large.

Vacuum pump connection Kit

Part No. **4001537**

1. Vacuum pump connection Kit.

2. Vacuum pump "Vacum-10Pa"

Part No. **5900621**



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.



NEW DESIGN

MODEL

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

Supplied complete with bell jar and silicon seal.

SPARES

Tempered glass bell 15 cm high and 23 cm Ø.

Part No. **4000475**

Silicon seal. Part No. **4000476**



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**



BACTERIOLOGICAL INCUBATORS

2000
serie

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.

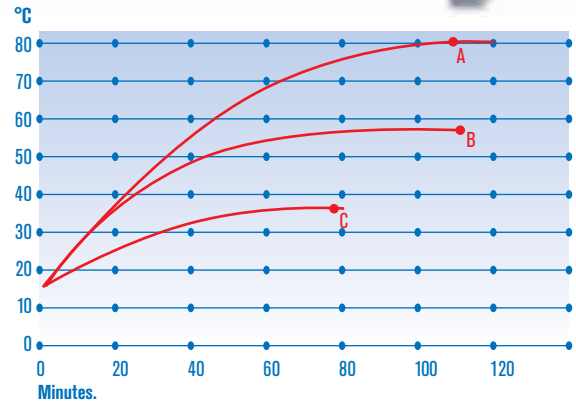
FEATURES, CONTROL PANEL, STANDARD AND ACCESSORIES (see pages 134 and 135).

SAFETY:

OVER TEMPERATURE CUT OUT INCORPORATED ACCORDING TO THE EN.61010 STANDARD.
ADJUSTABLE SAFETY THERMOSTAT DIN 12880.3.1 FITTED.



Horizontal model. Part No. 2001615



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'.

STANDARD EQUIPMENT

2 shelves and 4 shelf guides.

MODELS

Part No.	Capacity litres	Height / Width / Depth (interior) cm			Height / Width / Depth (exterior) cm			Shelves positions	Power W	Weight Kg
2000205	19	30	25	25	50	60	44	5	165	26
2000206	36	40	30	30	60	65	49	7	245	36
2001615	52	33	47	33	53	82	52	5	275	46
2000207	80	50	40	40	70	74	59	8	315	54
2000994	150	50	60	50	70	95	68	8	535	78

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.

SPARES

Shelves and guides.

Oven Part No.	2000205	2000206	2001615	2000207	2000994
Set guides (2 units)	2000011	2000012	2000012	2000013	2000015
Shelves	2000021	2000022	2000024	2000023	2000025

Each shelf requires two guides (one set).



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: ± 0.1 °C, UP TO 37 °C. HOMOGENEITY: ± 0.5 °C, UP TO 37 °C.
 SET ERROR: $\pm 2\%$ OF THE WORKING TEMPERATURE, RESOLUTION 0.1 °C
 INTERNAL TEMPERED GLASS DOOR.

2000
serie



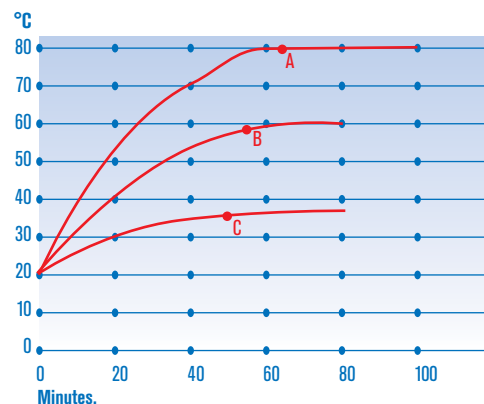
FEATURES, CONTROL PANEL, STANDARD AND ACCESSORIES (see pages 134 and 135).

SAFETY:

OVER TEMPERATURE CUT OUT INCORPORATED ACCORDING TO THE EN.61010 STANDARD.
 ADJUSTABLE SAFETY THERMOSTAT DIN 12880.3.1 FITTED.



Horizontal model. Part No. 2001616



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'.

RS-232 Interface output for a computer, printer or USB adapter.

STANDARD EQUIPMENT

2 shelves and 4 shelf guides.

MODELS

Part No.	Capacity litres	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Shelves positions	Power W	Weight Kg
2001246	19	30 25 25	50 60 44	5	150	26
2001247	36	40 30 30	60 65 49	7	225	36
2001616	52	33 47 33	53 82 52	5	250	46
2001248	80	50 40 40	70 74 59	8	300	54
2001249	150	50 60 50	70 95 68	8	525	75

SPARES

Shelves and guides.

Oven Part No.	2001246	2001247	2001616	2001248	2001249
Guides (2) (Set)	2000011	2000012	2000012	2000013	2000015
Shelves	2000021	2000022	2000024	2000023	2000025

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

ACCESSORIES



4120131 USB adapter model.

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

Accessories must be factory installed.



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"

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: $\pm 2\%$ OF THE WORKING TEMPERATURE, RESOLUTION 0.1 °C
INTERNAL TEMPERED GLASS DOOR.



SAFETY:

STANDARD EN.61010 OVER TEMPERATURE CUT OUT FITTED.
STANDARD DIN 12880.3.1. ADJUSTABLE SAFETY THERMOSTAT FITTED.

Capacities up to 720 litres

FEATURE

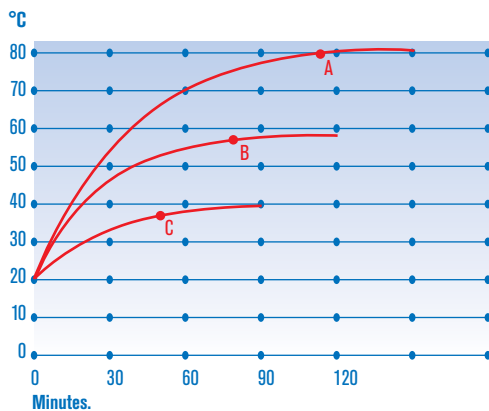
Microprocessor control and digital display of the temperature and time.
 Large surface area heating elements.
 Inner chamber made of AISI 304 stainless steel.
 Double door, interior door of tempered glass that allows the user to see the contents of the chamber without opening the door.
 Adjustable air vent.
 Epoxy covered external case.
 RS-232 Interface output for a computer, printer or USB adapter.

STANDARD EQUIPMENT

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



Model Part No. 2000237.



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'

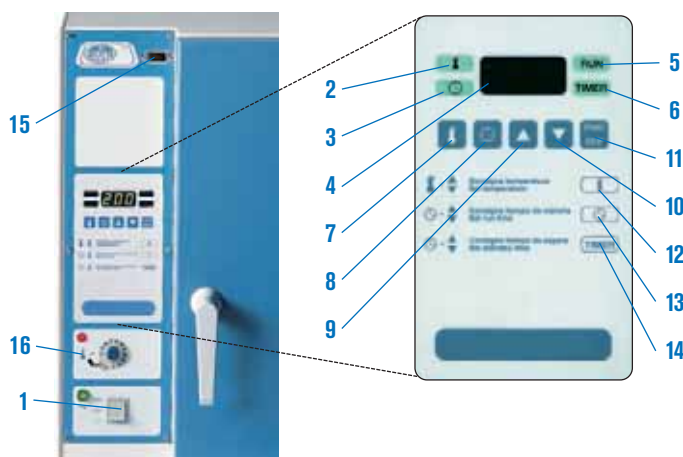
Note: To obtain the optimum homogeneity at the set temperature, the load should not surpass more than 70 % of the volume of the chamber.



Models Part No. 2003711 and 2002471.

CONTROL PANEL

1. Illuminated mains switch.
2. Temperature mode indicator.
3. Time mode indicator.
4. Display for temperature and time.
5. Operating, run mode.
6. Delay time indicator.
7. Push button for temperature selection.
8. Push button for time selection.
9. Push button to "increase" value or parameter.
10. Push button to "decrease" value or parameter.
11. Push button to 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, printer or USB adapter.
16. Adjustable safety thermostat. Maintains the temperature in case the microprocessor fails. Indication lamp.



MODELS

Part No.	Type	Capacity litres	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	N° of shelf guides	Power W	Weight Kg
2000237	1 door	288	80 60 60	97 91 76	8	570	87
2003711	2 door	400	100 80 50	130 114 75	10	1100	160
2002471	2 door	720	120 100 60	152 134 85	12	1600	225

ACCESSORY



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

Accessories must be factory installed.



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.

Oven Part No.	2000237	2003711	2002471
Shelves	2002372	2000063	2000064
Guides (2) (Set)	2002371	-	-

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



Incubation chamber "Boxcult"

FAN CONVECTION.

ADJUSTABLE TEMPERATURES FROM AMBIENT +5 °C UP TO 57 °C.

STABILITY: ±0.25 °C, UP TO 37 °C HOMOGENEITY: ±1 °C, UP TO 37 °C.

SET ERROR: ±2 % OF THE WORKING TEMPERATURE. RESOLUTION 0.1 °C.

SAFETY: SAFETY STANDARD EN 61010. OVER TEMPERATURE SAFETY THERMOSTAT FITTED.

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

Part No.	Capacity litres	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Power W	Weight Kg
3000957	110	50 47 47	61 51 51	220	18

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**



Incubation chamber "Boxcult" Part No. 3000957 with base Part No. 3001172 and support rack with two shelves Part No. 1000973. Supplied as accessories.



Cooled low temperature incubator "Prebatem"

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 12880.3.1. 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.

FEATURE

1. Microprocessor control and temperature display.
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 .
9. Support rack for trays.
10. Shelves of AISI 304 stainless steel.
11. Epoxy coated outer case.

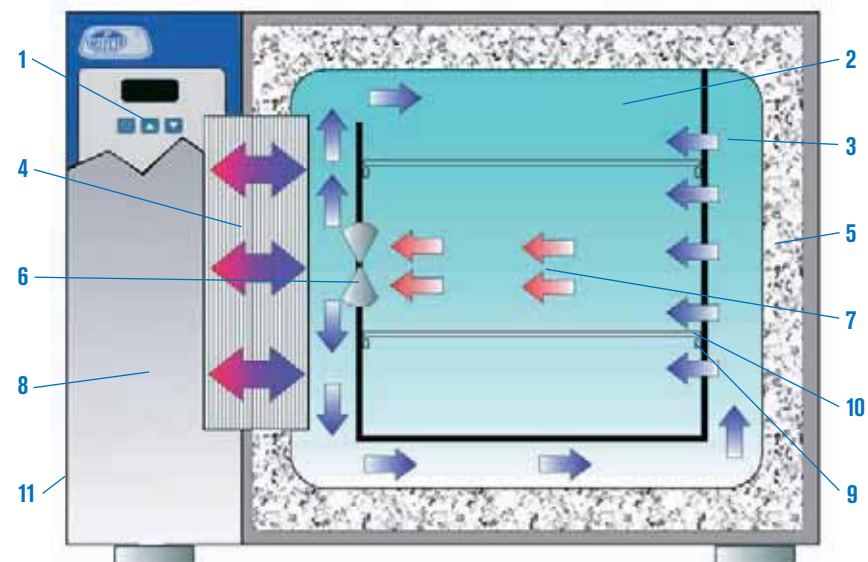
J.P. Selecta original technology

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.
16. Adjustable safety thermostat. Maintains the temperature in the case if the microprocessor fails. Indication lamp.
17. Internal tempered glass door.
18. RS-232 Interface output for a computer, printer or USB adapter.

PERFORMANCE

	Specification		
	at 5 °C	at 37 °C	at 60 °C
Stability	±0.05 °C	±0.05 °C	±0.05 °C
Homogeneity	±0.35 °C	±0.30 °C	±0.75 °C
Set error	±0.25 °C	±0.20 °C	±0.40 °C

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.

RS 232 to download
for a computer,
printer of all para-
meters or USB
adapter.

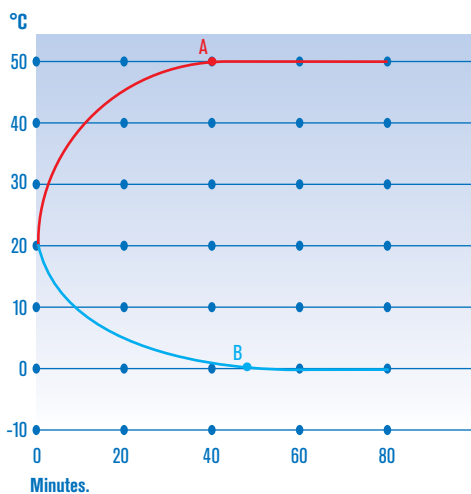


STANDARD EQUIPMENT

2 shelves and 4 shelf guides.

MODELS

Part No.	Capacity litres	Height / Width / Depth (interior) cm			Height / Width / Depth (exterior) cm			Shelf guides	Power consumption W/hr.		Power W	Weight Kg
									at 5 °C	at 40 °C		
2000961	36	40	30	30	60	65	49	7	70	50	310	54
2000962	80	50	40	40	70	75	59	8	75	55	310	73
2001250	150	50	60	50	70	95	68	8	90	60	310	94



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



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

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**



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

SPARES

Shelves and guides.

Oven Part No.	2000961	2000962	2001250
Guides (2) (Set)	2000012	2000013	2000015
Shelves	2000022	2000023	2000025

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



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 CLASE 3.1. DOUBLE INDEPENDENT OVER TEMPERATURE SAFETY THERMOSTAT.
 CO₂ DEVIATION FROM SET VALUE. OPEN DOOR INDICATOR, ELECTRICAL FAULT INDICATOR. LOW CO₂ PRESSURE.

Infrared CO₂ sensor

Chamber sterilization function

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.
3. Button single control of multilevel functions.
4. Printer (Optional)
5. Main On switch.

MODEL

Part No.	Capacity litres	Height/Width/Depth (interior) cm	Height/Width/Depth (exterior) cm	Shelf guide positions	Power W	Weight Kg
4002628	150	65 50 46	95 65 73	9	800	110

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**



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

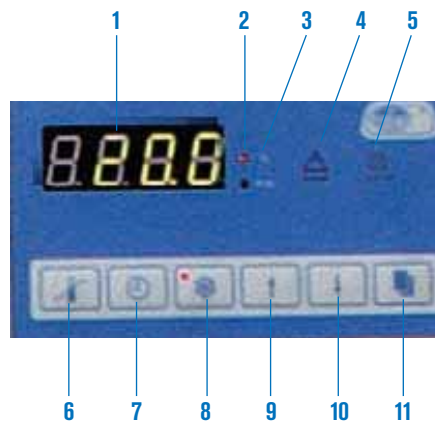
Epoxy coated external case. Interior AISI304 stainless steel. Door with double glazed glass to maintain internal temperature. Illumination switch with internal fluorescent light. Side port for the introduction of external cables probes and tubes etc. Cooling gas R134a. 4 wheels with brake.

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.



SPARES

Part No.
1001619 Guides (2) (Set).
1001620 Shelves.



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

STANDARD EQUIPMENT

2 shelves and 4 shelf guides.

MODEL

HOTCOLD	Part No.	Range °C	Capacity litres	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Number of shelves	Motor HP	Power W	Weight Kg
S	2101618	+5 +65	160	65 50 43	128 63 63	10	3/8	400	70



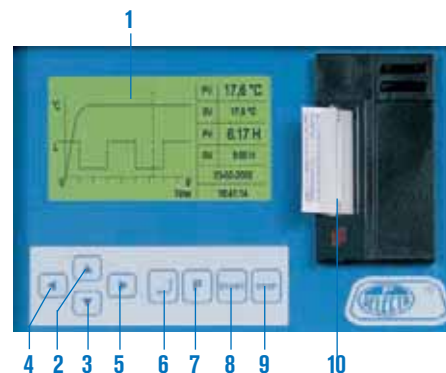
Precise refrigerated cabinets “Hotcold A-B-C-UB-UC”

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.

PRECISION TABLE
 STABILITY ±0.1 °C, UP TO 20 °C
 HOMOGENEITY ±0.5 °C, UP TO 20 °C
 SET ERROR ±0.5 °C
 RESOLUTION 0.1 °C



- 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.
 9. Push button stop.
 10. Printer for time and temperature (Optional). Part No. 2101508, (needs to be factory fitted.)

Models A, B and UB.

Models C and UC.

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 evaporation 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.

Two external ports for external connections.
 Temperature calibration.
 Adjustable timer.
 RS-232 Interface output for a computer, printer or USB adapter.

CONTROL SYSTEM

Programmable graphic display of temperature and time. All operation modes are programmable in up to 5 cycles and each cycle can be programmed at 1 hour intervals. These cycles can be repeated indefinitely or can be manually finished. Up to 5 different temperatures can be programmed into each cycle. All parameters can be stored. A temperature safety thermostat comes as standard.

MODELS

HOTCOLD	Part No.	Range °C	Capacity litres	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Number of shelves	Included shelves	Power W	Power HP	Weight Kg
A	2101502	0 +50	319	139 48 45	198 60 64	14	3	180	1/5	78
B	2101503	0 +50	442	126 58 55	198 70 71	14	3	200	1/5	89
C	2101504	0 +50	600	136 58 69	207 70 82	14	4	750	3/8	100
UB	2101505	-10 +50	442	126 58 55	198 70 71	14	3	750	1/2	94
UC	2101506	-10 +50	600	138 58 69	207 70 82	14	4	900	1/2	110

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.
 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

Shelves and guides.

Cabinet Part No.	2101502	2101503 / 2101505	2101504 / 2101506
Guides set (4 units).	1001801	1001802	1001803
Shelves	1001804	1001805	1001806

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



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.**



PRECISION TABLE

STABILITY	±0.5 °C
HOMOGENEITY	±1 °C
SET ERROR	±1 °C
RESOLUTION	0.1 °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%.

	Mode A	Mode B	Mode C	Mode D
Humidity	NO	NO	YES	YES
Illumination	NO	YES	NO	YES
Temperature range	5 / 50 °C	10 / 50 °C	18 / 40 °C	18 / 40 °C
Stability	±0.5 °C	±0.5 °C	±0.5 °C	±0.5 °C
Homogeneity	±1.0 °C	±1.0 °C	±1.0 °C	±1.0 °C
Resolution	0.1 °C	0.1 °C	0.1 °C	0.1 °C
Set Error	±1.0 °C	±1.0 °C	±1.0 °C	±1.0 °C
Humidity range	-	-	50 / 98% Hr	50 / 80% Hr
Illumination range (Choice of 3)	-	0 / 4 K / 12 K lux	-	0 / 4 K / 12 K lux
Humidity resolution	-	-	1%	1%
Humidity precision	50 - 75%	-	±3%	±4%
	75 - 80%	-	±4%	±5%

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.

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

MODEL

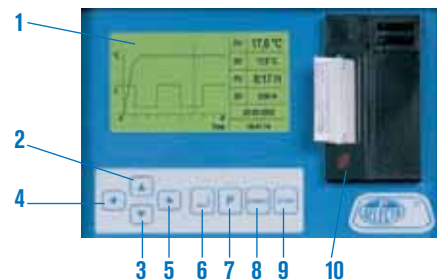
HOTCOLD	Part No.	Range °C	Capacity litres	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Number of shelves	Motor HP	Power W	Weight Kg
GL	2101507	5 +50	557	138 58 69.5	208 70 95	14	3/8	1300	198

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.

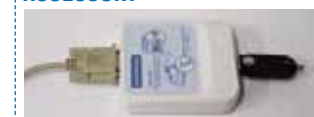


STANDARD EQUIPMENT

2 shelves and 8 shelf guides.



ACCESSORY



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. **1001533** Guides (4) (Set)
1001536 Shelves
Each self requires 4 guides i.e. one set.

Muffle Furnaces



Electric Muffle Furnace "Select-Horn"

TEMPERATURE CONTROLLABLE UP TO 1150 °C.
 SET ACCURACY: ± 1 °C OF THE SET VALUE. RESOLUTION: 1 DIGIT.
 DIGITAL ELECTRONIC CONTROLLER FOR TEMPERATURE AND TIME THAT HAS THE POSSIBILITY TO PROGRAM A SLOPE OF 8 SEGMENTS OR TWO SLOPS OF 4 SEGMENTS.

SAFETY:

PROBE BREAK DISCONNECTS THE POWER TO THE FURNACE AUTOMATICALLY.
 MICROWITCH THAT DISCONNECTS THE POWER OF THE HEATER ELEMENTS WHEN THE DOOR IS OPEN.
 FLIP 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.

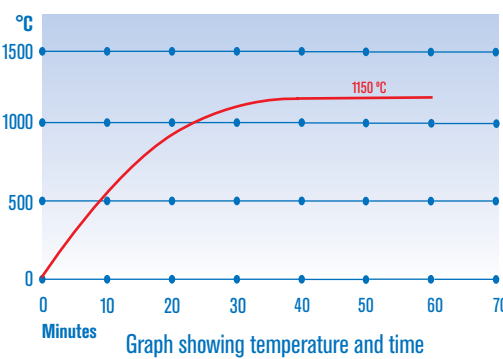


Image of the flap door system in operation.

CONTROL PANEL

Mains Switch.

Mains indicator lamp.

Digital electronic controller for temperature and time that has the possibility to program a slope of 8 segments or two slopes of 4 segments.

Simultaneously indication of the actual and set temperature (4 digits).

K-Type Probe.

MODELS

Part No.	Capacity litres	Height / Width / Width (interior) cm	Height / Width / Depth (exterior) cm	Power W	Weight Kg
2000366	3.6	10 15 24	52 54 56	2500	54
2000367	9	15 20 30	58 59 65	3000	70

Supplied complete with support tray, made from annealed steel.



ACCESSORIES. All accessories need to be fitted in the factory prior to delivery.



Programmable Microprocessor.

Capacity: 10 Programs of 10 segments per program.
Run time for 1 program: from 1" to 99 hours.
Program repetition: from 0 to 99 times or cycles.
Precision: $\pm 0.25\%$
Part No. **2001227**



Exterior exhaust tube.

Located at the back of the furnace with a ventilator motor to extract gases and vapours.
With an 80 mm Ø hat adapter.
Gases and Vapours can be extracted outside through the connecting tube.
Power consumption: 30 W.
Part No. **2001477**



ACCESSORIES



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.



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**



Crucibles made of zirconium Zr.
Crucibles made of pure nickel Ni.
Crucibles made of glazed porcelain.
Crucibles made of stainless steel.
(See page 176).



Muffle furnace electric "N-8 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 of ceramic fibre, resistant and durable (No asbestos). Heater situated at the side and bottom of the chamber.

CONTROL PANEL

Illuminated main 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 litres	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Power W	Weight Kg
N-8 L	2200851	8.2	14.5 20 30	41 43.5 54	1800	33

Supplied complete with a refractory ceramic tray as a base and support for material to be assayed.
Shelf size: 1 cm height x 16 cm width x 25 cm depth.



Muffle furnace electric "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.

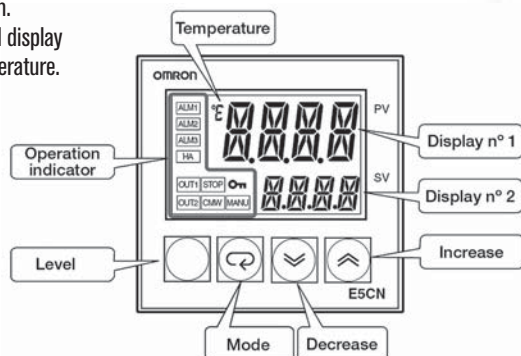


FEATURES

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 litres	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Power W	Voltage V	Weight Kg
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.



Muffle furnace electric "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.

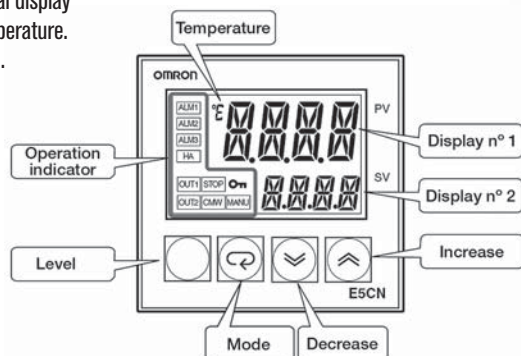


FEATURES

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.



MODEL	Part No.	Capacity litres	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Power W	Voltage V	Weight Kg
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.