



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

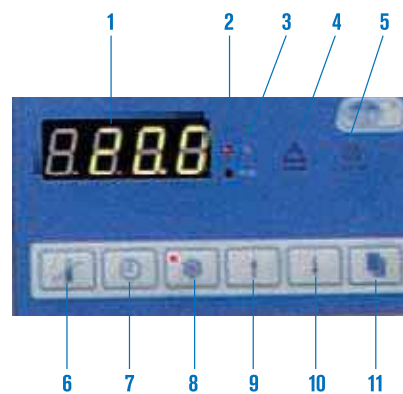
Epoxy coated external case. Interior AISI304 stainless steel. Door with double glazed glass to maintain internal temperature. Illumination switch with internal fluorescent light. Side port for the introduction of external cables probes and tubes etc. Cooling gas R134a. 4 wheels with brake.

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
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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.



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.

PRECISION TABLE	
STABILITY	±0.5 °C
HOMOGENEITY	±1 °C
SET ERROR	±1 °C
RESOLUTION	0.1 °C

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).

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.

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.

