

COOLED INCUBATOR

User manual



Cooled incubator with forced ventilation, multifunctional with microprocessor temperature controller.

Model	Description	Temperature range
IC 150-R	Forced air cooled incubator 150L (useful volume)	0 °C to + 60 °C

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1. Safety information

- **Definitions of warning words and symbols**

This manual contains extremely important safety information, to avoid personal injury, damage to the instrument, malfunctions or incorrect results due to failure to comply with them. Read entirely and carefully this manual and be sure to familiarize with the tool before starting to work with it. This manual must be kept near to the instrument, so that the operator can consult it easily, if necessary. Safety provisions are indicated with warning terms or symbols.

- **Reporting terms:**

DANGER/WARNING/ATTENTION for a medium-risk hazardous situation, which could lead to serious injury or death, if not avoided.

ADVICE for important information about the product.

NOTE for useful information about the product.

- **Warning symbols:**



DANGER

This symbol indicates an **imminently hazardous** situation which, if not avoided, could result in death or serious (irreversible) injury.



WARNING

This symbol indicates a potentially hazardous situation which, if not avoided, could result in death or serious (irreversible) injury.



ATTENTION

This symbol indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate (reversible) injury.



NOTICE

This symbol draws attention to possible damage to the instrument or instrumental parts.










NOTES

This symbol identifies useful product information.

- **Pictograms**

Throughout this manual there are various symbols identifying dangers, prohibitions and obligations as illustrated below.



- **Danger symbols**

	Danger of electric shock
	Danger of explosion
	Fire hazard
	Danger of poisoning
	Danger of overheating surfaces
	Danger of damage to health caused by toxic substances
	Risk of injury from tipping objects
	Risk of injury from lifting heavy objects
	Danger of environmental damage
	Danger of corrosion

- **Prohibition symbols**








	Do not wet with water
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- **Symbols of obligation**

	Disconnect the instrument from the power supply by pulling the plug
	Eye protection must be used

2. General safety instructions


If the cooled incubator is not installed, commissioned, cleaned, adjusted or set up correctly, there is a risk of malfunction that could cause physical injury to persons and material damage to the instrument and samples. Therefore, the cooled incubator must only be installed, commissioned, cleaned, adjusted and set up by qualified personnel.

 DANGER	
  	<p>Danger of electric shock and death</p> <ul style="list-style-type: none"> ⊘ Do not get the instrument wet during installation, commissioning or maintenance. ⊘ Do not connect the instrument to the power supply if the rear panel is dented or damaged. ➤ Before opening the rear panel, remove the plug from the power supply. ➤ If the power cord or rear panel of the instrument is damaged, discontinue use immediately, remove the plug from the power supply and contact your dealer for repairs. ➤ All work on electrical components of the instrument must be carried out by qualified personnel only.
	<p>Danger of explosion</p> <ul style="list-style-type: none"> ➤ Install the instrument only where there is no risk of explosion. ⊘ Do not keep air/solvent mixtures or explosive dusts in the vicinity. ⊘ Never introduce materials into the instrument that are explosive or flammable at the selected operating temperature. ⊘ Never introduce materials containing flammable or explosive solvents into the instrument. ⊘ Never introduce materials into the instrument which by sublimation or pyrolysis give rise to the formation of flammable materials at the selected operating temperature.
 	<p>Danger of poisoning and death</p> <ul style="list-style-type: none"> ⊘ Never introduce materials into the instrument whose disintegration could create poisonous gases at the selected operating temperatures.

 WARNING	
	<p>Fire hazard</p> <ul style="list-style-type: none"> ⊘ Cooled incubators must not be used if the inspection of thermostat with safety class 2 has failed. ➤ If the safety thermostat test fails, immediately stop using the oven/incubator, remove the plug from the power supply and contact your dealer for the necessary repairs. ➤ Always place the instrument on a working surface that is resistant to a temperature of 100 °C. ⊘ Do not put anything under the instrument (paper, plastic film, etc.). ➤ Always connect the instrument only to a power supply with a fuse of at least 10A. Follow the recommendations of your local power supply company.
 ATTENTION	
 	<p>Risk of injury and breakage</p> <ul style="list-style-type: none"> ➤ Always place the instrument only on surfaces that can support its weight.
	<p>Overturning hazard and risk of injury</p> <ul style="list-style-type: none"> ⊘ Do not move the instrument when the front wheels are locked in place. ➤ Check that there are no obstacles when moving the cooled incubator.
  	<p>Risk of injury, Risk of slipping or overturning and risk of damage to the instrument</p> <ul style="list-style-type: none"> ➤ The instrument must be lifted by 2 people. ➤ The instrument must be transported in its original packaging only. ➤ The instrument must always be lifted from below with mechanical tools (e.g., forklift truck). ⊘ The instrument must not be lifted directly from below with mechanical tools without supporting pallets (e.g., forklift truck). ⊘ The instrument must not be lifted or dragged by pulling the door.

3. CE marking data

Argolab instruments are manufactured in compliance with Directive 2006/42/EC and the relevant Community Directives applicable at the time of their placing on the market (fac - simile below).

SUZHOU BEING MEDICAL DEVICE.CO., LTD	DECLARATION OF CONFORMITY EU In accordance with Annex II A - Directive 2006/42/EC Annex IV - EMC Directive and Annex VI - Directive 2011/65/EU (RoHS)	
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No ISETC.000320200416

Manufacturer's Name : SUZHOU BEING MEDICAL DEVICE CO., LTD.

Manufacturer's Address : NO. 108 GONGXIANG RD QIANDENG TOWN, KUNSHAN CHINA

Tel: +86-21-56633709

E-mail: JILL.SHEN@BLUEPARD.COM

Authorized Representative: Giorgio Bormac S.r.l - Via della Meccanica, 25 41012 Carpi (MO)-ITALY

Object of Declaration: COOLING INCUBATORS

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Product description: COOLING INCUBATORS

Model: BPC-150F

Serial Number: from s/n xxxxxxxxxxxx to xxxxxxxxxxxx

Product options: This declaration covers all options of the above products

The object of the declaration describe above complies with the essential requirements of the following applicable European Directives, and carries the CE marking accordingly:

EMC Directive: 2014/30/EU	<i>Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to electromagnetic compatibility.</i>
RoHS Directive 2011/65/EU	<i>Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.</i>
LVD Directive: 2014/35/EU	<i>Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits Text with EEA relevance.</i>
Machinery Directive: 2006/42/EC	<i>DIRECTIVE 2006/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast)</i>

And conforms with the following standards:

EN 61010-1:2010+A1:2019

EN 61326-1:2013

EN 61000-3-2:2014

EN 61000-3-3:2013

EN 60204:2018

EN ISO 12100:2010

EU regulation 517/2014 concerning F-GAS Directive 2014/68 UE regarding PED

**NAME AND ADDRESS OF THE PERSON AUTHORISED TO COMPILE
THE TECHNICAL FILE**

Giorgio Bormac S.r.l. - Via della Meccanica, 25 41012 Carpi (MO) -
ITALY

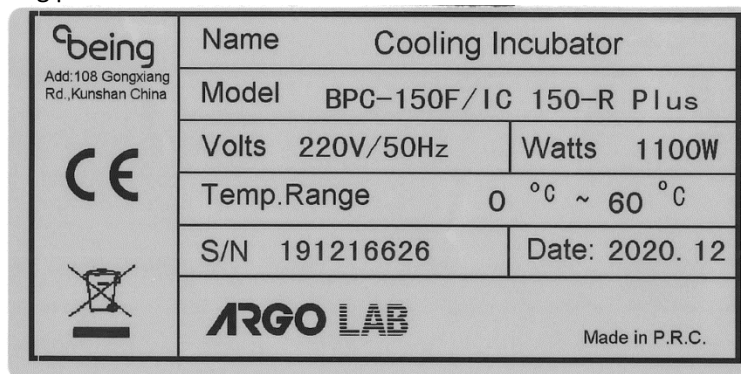
Signed for and on behalf of: **XIE WEIMIN**

Place 24/09/2020

SHANGHAI

SIGNATURE _____

Facsimile of the CE marking plate:







4. Content of package

The instrument is delivered complete with the following parts:

1. stainless steel wire shelves.
2. brackets for shelves.
3. Power supply cable.
4. Fuses.
5. Condensation collection tray
6. User manual.

5. Transportation

• Instructions for safe transportation

 ATTENTION	
  	<p>Risk of injury, of slipping or overturning and risk of damage to the instrument</p> <ul style="list-style-type: none"> ➤ The instrument must be lifted by 2 people. ➤ The instrument must be transported in its original packaging only. ➤ The instrument must always be lifted from below with mechanical tools (e.g., forklift truck) together with the supporting pallet. ⊗ The instrument must not be lifted directly from below with mechanical tools without supporting pallets (e.g., forklift truck). ⊗ The instrument must not be lifted or dragged by pulling the door.

• Transportation of an already used cooled incubator



- Switch off the Argolab cooled incubator by pressing the main switch.
- Remove the power plug from the socket.
- Remove the shelves.
- Clean the Argolab cooled incubator and its shelves (see chapter 14).
- Dry the inside of the Argolab cooled incubator and the shelves.
- Wrap the shelves with bubble wrap.
- Pack the shelves in their original packaging and place them in the Argolab cooled incubator.
- Pack the Argolab cooled incubator in its original packaging.
- Take care that the Argolab cooled incubator does not get wet during transport.
- During transport, maintain the permitted room temperature (from -10 °C to 60 °C).

6. Conservation

- Store the Argolab Refrigerated Incubator only in closed, dry rooms.
- The permitted storage temperature is -10 °C to 60 °C. The maximum permitted storage humidity is 85% RH without condensation.

7. First installation



• Preliminary operations

- The oven should be installed in following conditions:
- Dry, clean, stable worktable with a flat horizontal surface and heat resistant.
- At least 30 cm free around the instrument.
- Room temperature between 5 °C and 40 °C and relative humidity maximum of 85%.
- Power supply socket with earth connection.
- Power supply of 220/240 V - 50 Hz.

• Positioning the condensation collection tray

Before switching on the instrument, it is necessary to position the condensation collection tray supplied with the instrument. The tray must be inserted into the guides on the lower part of the instrument (see Figure 1).

This operation must be repeated each time it is removed for cleaning and/or emptying.

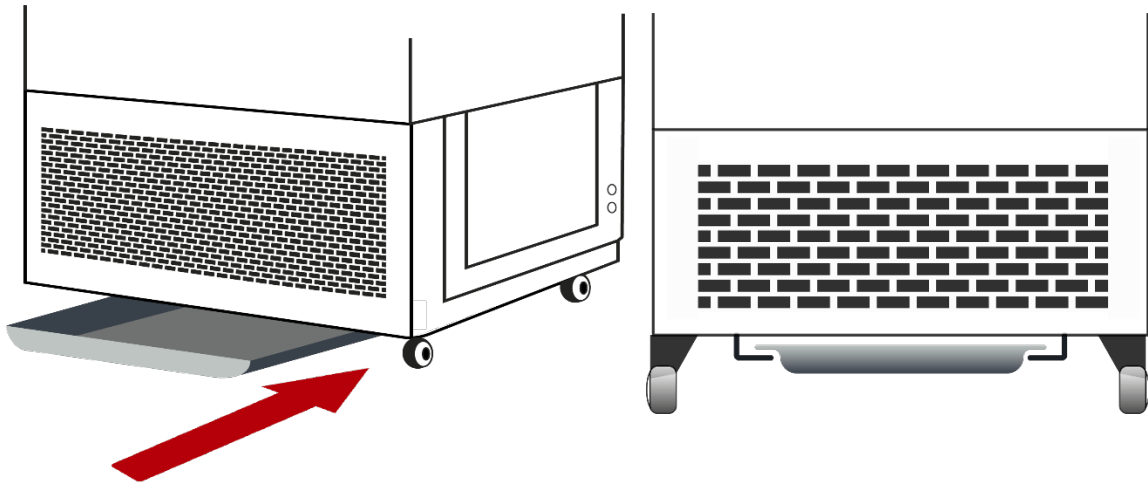





Figure 1 - positioning of condensate collection tray

NOTICE	
	Risk of overheating - Damage to the instrument Ø DO NOT install the instrument in not ventilated area. ➤ Ensure that there is enough ventilation to disperse heat.
	 DANGER
	Risk of explosion and death Ø DO NOT operate the device in potentially explosive areas. Ø DO NOT use explosive dust or air-soluble mixtures in the environment.

8. Instrument parts

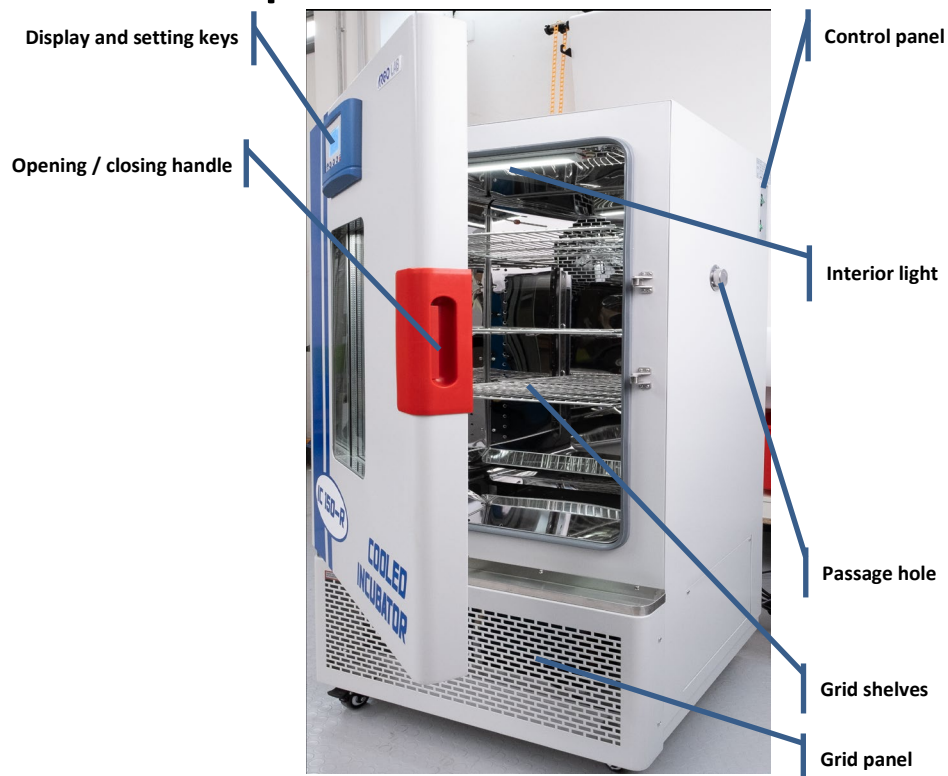


Figure 2 - Instrument



Figure 3 - Display and setting buttons









Figure 4 - Control panel (located on the right-hand side of the refrigerated incubator)

• Display and controls



Figure 5 - Display

COMMAND	DESCRIPTION
	The SET/PROG button allows you to set the working parameters and to enter/exit from the programs. In combination with the SHIFT key, it allows you to access to menus with password (see paragraph 11).
	The SHIFT button allows you to quickly change the digit (decimal, units, tens, etc.) of the value of the parameter you are editing. In combination with the SET/PROG key allows you to access to menus with password (see paragraph 11).
	Adjustment buttons allow you to increase or decrease the value of the operating parameter being edited.
	The START / STOP button allows you to start / stop an operating cycle or a program.
	The ON/OFF button allows you to turn on or off the instrument.
	The ON/OFF light button is used to switch the light inside the instrument chamber on and off.

9. Technical specifications



Cooled incubator	IC 150-R
Useful volume	150 litres
Temperature range / resolution	0 ÷ + 60 / 0,1 °C
Homogeneity at 25°C	± 0,5 °C
Temperature variation at 25°C	± 0,1 °C
Recovery time at 25°C	4 min
Timer	99:59 hh:min and ∞
Safety class	3.1
Power supply / Power	230 V / 1100 W
Internal dimensions (W x H x D)	500 x 800 x 360 mm
Number of shelves (standard / max.)	3 / 9
Minimum useful distance between shelves	50 mm
Maximum shelf load	10 Kg
External dimensions (W x H x D)	650 x 1350 x 620 mm
Weight	100 kg

10. Operation

• Switching on the instrument

Connect the power cable to a grounded socket. Switch on the instrument using the ON/OFF button. The button and the display light up.

The display shows the initialisation sequence and then the instrument is ready for use.




NOTE: when the instrument is switched on, it emits an intermittent acoustic signal; the visual alarm icon  and the word "end" appear on the display, indicating that a heating cycle had been completed before switching it off. The acoustic signal can be muted by pressing any key, and the icon  appears on the display.






• Programming

Each Argolab cooled incubator can manage up to 7 programmes, each consisting of 10 working steps in which the temperature, timer and ventilation speed (where applicable) can be set. In addition to the above-mentioned programmes, there is "PROG 0", which can be used to set a simple operating cycle with a single working step, consisting of the following parameters: temperature, timer and ventilation speed (where applicable).









• Program recall

When the instrument is switched on and in standby (heating cycle off), by briefly pressing the SET/PROG key  once, the word "PROG" and the program number alongside start flashing simultaneously. Use the keys  to call up the desired program. Confirm by briefly pressing the SET/PROG button . The selected program is ready to start.






• Editing a program

To edit a program, it is necessary to keep pressed the SET/PROG button  for few seconds: the word "PROG" and the program number start flashing simultaneously and then only the program number flashes. At this point, it is possible to choose the program number to be modified using the keys  and confirm the choice by pressing the SET/PROG key  briefly. Subsequently, the instrument enters the edit mode of the program you want to edit and the temperature value of the first STEP flashes together with the word "PROG", indicating that you are in the programming phase.

STEP 1

Use the keys  and SHIFT  to set the temperature value of the first working STEP. Press briefly the SET/PROG key  to confirm the temperature value and to pass to the timer value (always of STEP 1). Use the keys  and SHIFT button  to set the desired time value for the first STEP and confirm the value by briefly pressing the SET/PROG button . Use the keys  to set the ventilation speed in (H=High, M=Medium, L=Low) and confirm the value by pressing the SET/PROG button  shortly.

STEP 2

Set the temperature value of the second working STEP using the keys and SHIFT . Press briefly press the SET/PROG button to confirm the temperature value and to switch to the timer value (also for STEP 2). Set the desired time value for STEP 2 with the keys  and SHIFT and confirm the value by briefly pressing the SET/PROG button . Use the keys  to set the ventilation speed (H=High, M=Medium, L=Low) and confirm the value by briefly pressing the SET/PROG button .



REPEAT THE ABOVE INSTRUCTIONS FOR EACH STEP YOU WISH TO PROGRAM.


NOTE: if you do not want to use all the 10 STEPS of the program you are storing, it is necessary to force the instrument to finish the program itself. To do this, simply set the time to "00:00" in the step following the last one you wish to use.



EXAMPLE: If the last working step to be used is the fifth, it is enough to set the timer in the sixth step to "00:00", thus forcing the instrument to stop at the end of the fifth step.


• Edit Prog 0

To modify "PROG 0" select the above-mentioned program in the selection phase and, by keeping pressed the SET/PROG button  for few seconds, the word PROG and the number 0 will flash simultaneously and then only the number 0; press SET/PROG button  again to enter the edit mode which allows to set the desired temperature, timer and fan speed (where applicable).


NOTE: in "PROG 0" by setting timer 00:00, the Argolab oven/incubator will work at the set temperature until the operator stops the heating cycle by pressing the START/STOP key .



• Start/stop a program

Once the program(s) has/have been set, it is enough recalling one of them and long press the START/STOP button  (4-5 seconds) to start the selected program.





The word "end" at the top right of the display disappears; the word RUN appears at the bottom left and the display simultaneously shows program number, step in progress, timer, set temperature, temperature measured inside the chamber and ventilation speed if present.

At any time, it is possible to stop the cycle manually by long pressing the START/STOP button  (4-5 seconds). At the end of the set program or after the manual stop, the instrument emits an intermittent acoustic signal while the visual alarm icon and the word "end" appear on the display. Press any key to silence the audible signal and the icon.

NOTE: The audible signal will not end until it is silenced by the operator, but the heating cycle has ended so the samples inside the instrument will remain exposed to the temperature inside the chamber.





11. Access to submenus with password




By pressing the SET/PROG  and SHIFT  buttons simultaneously for a few seconds, it is possible to access some password-protected functions and parameters. To access these sub-menus and avoid entering the operating parameter settings by mistake, it is advisable to first press the SHIFT  key and then, while holding it down, also press the SET/PROG  key for few seconds. Once this operation has been carried out, the word "Lk" (lock) appears in the top right-hand corner of the display in place of the word TIME, next to the digits "0000" (password). Here below, you can find the passwords and the access sequence to the various parameters/functions.

PASSWORD	FUNCTION/PARAMETER	DESCRIPTION
0000	Pn	Number of the program to which the functions dy and Cy apply
	Cy	Number of repetitions of the selected program
	dy	Delayed start of selected program
0003	tm	Temperature limit for sample protection
	Po	Restart mode after absence of power energy
	AL	Temperature limit for over-temperature alarm
	Pb	Temperature offset on single point
	PK	Temperature offset on entire range
	PA	Temperature offset at room temperature sensor

- **Number of the programme to which the Delay and Cycle functions apply**

In Argolab cooled incubators, it is necessary to define to which programme (from 1 to 7) to apply the start delay (Delay) and repeat (Cycle) functions. To do this, enter the first submenu with password access (0000), change the Pn (program number) parameter using the keys  and confirm the chosen program by pressing the SET/PROG button  shortly.




- **Repetition of a selected program**

The instrument allows the selected program to be repeated from 1 to several times. To do this, after having chosen the program to which to apply the above-mentioned function through the parameter Pn, it is possible to set the value of Cy (cycle)= 1, 2, 3, through the keys  and SHIFT button  and confirm it by pressing the SET/PROG key  shortly.



NOTE: It is also possible to set the continuous repetition of a programme by putting it in a continuous loop by setting the parameter Cy=0.



- **Delay start function**

After selecting the program to which this function is to be applied through the parameter Pn, it is possible to set a delay (in hours and minutes) at the start of the operating cycle. Set the desired start delay value (hh:mm) by pressing the keys. You can move quickly between digits using the SHIFT key . Confirm the value by pressing SET/PROG  again, the display returns to the standby screen. By long pressing the START/STOP key  (4-5 seconds) the instrument starts the program but does not start heating immediately: the word "end" in the top right-hand corner of the display and the delay time flash alternately, marking the wait from the set delay time to the actual start. Once the set delay time has elapsed, the instrument starts the program and the regular timer appears on the display.

12. Introduction of samples into the cooled incubator

 DANGER	
	Explosion hazard and risk of death <ul style="list-style-type: none"> Ø Never introduce materials into the instrument that are explosive or flammable at the selected operating temperature. Ø Never introduce into the instrument's materials containing flammable or explosive solvents. Ø Never introduce into the instrument materials that by sublimation or pyrolysis create flammable materials at the selected operating temperature.
	Poisoning and death hazard <ul style="list-style-type: none"> Ø Never introduce materials into the instrument which could create poisonous gases. Ø Never introduce materials into the instrument that can react with moisture and produce explosive gases.

- **Uploading samples**

To obtain optimal air circulation in the Argolab refrigerated incubator chamber, it is recommended to leave empty spaces between the samples (see Figure 7). For proper convection of the samples, it is recommended that they not come into contact with the walls of the instrument chamber.

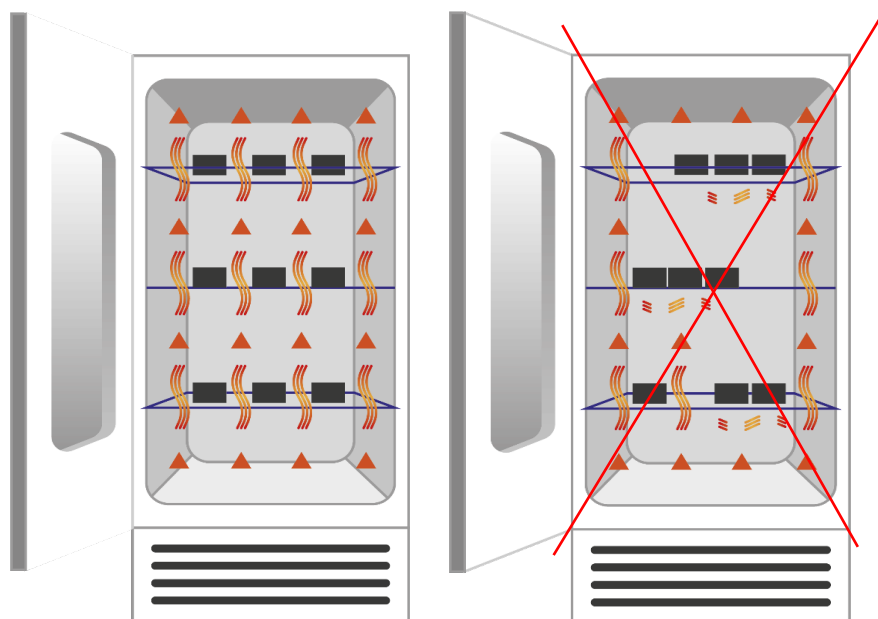








Figure 7 - Sample placement

• Temperature limit for sample protection

The instrument foresees the possibility of limiting the maximum working temperature to protect the samples from an incorrect temperature setting of the heating cycle. Follow the instructions in paragraph 11 and use the keys  to set the password 0003. You can move quickly between the digits using the SHIFT key . Confirm the value by pressing again the SET/PROG button . The display in the top right-hand corner shows the parameter "tm" (max. temperature) and the maximum value for that type of instrument (different between oven and incubator). Set the maximum temperature value that you do not want the instrument to exceed during operation by pressing the keys . You can move quickly between the digits using the SHIFT key . Confirm the value by pressing SET/PROG button again .

NOTE: to determine the correct "tm" value, the natural and inevitable initial temperature peak that the Argolab cooled incubator will have during thermostating must be considered.



Application example: If the temperature set for the heating cycle is 50 °C and a limit temperature (tm) of 40 °C is set, the instrument will attempt to reach the temperature indicated during parameter setting (100 °C), even if it is higher than the limit temperature set in this submenu (tm). When 40°C is reached the instrument goes into alarm with an intermittent acoustic signal (can be silenced by pressing any key) and the heating element is no longer powered until the temperature falls below the limit temperature ("tm").







NOTE: the device will always attempt to reach the set temperature for the heating cycle and consequently, if it is higher than the limit, the device will go into an over-temperature alarm as explained in the previous paragraph.



• Restart mode after absence of power energy

The mode in which the instrument starts working again after a power failure can be set:

Po VALUE	DESCRIPTION
0	When the power supply returns, the instrument does not automatically resume the cycle. heating, but it must be restarted manually.
1	When the power supply returns, the instrument automatically resumes operation from the beginning of the interrupted heating cycle.
2	When the power supply returns, the instrument automatically resumes operation from the precise point in the heating cycle at which it was interrupted.

Follow the instructions in paragraph 11 and use the keys  to set the password 0003. You can move quickly between the digits using the SHIFT key . Confirm the value by pressing SET/PROG  again. The parameter "tm" (max. temperature) appears in the upper right-hand corner of the display and you can move on to the next parameter "Po" (Power) by pressing SET/PROG button  again. Set the desired value (0, 1, 2) by pressing . Confirm the value by pressing the SET/PROG button  again.







- **Temperature limit for over-temperature alarm**

It is possible for the user to set the temperature value beyond which the instrument goes into overtemperature alarm.

NOTE: *although it can be modified by the operator, this value is already set at the factory and is specifically calibrated to the type of instrument in question.*



It is therefore advisable not to modify this value unless strictly necessary, as temperature fluctuations above or below the set value, especially in natural convection models, are completely normal and therefore reducing the AL value excessively would risk causing the instrument to go into alarm frequently and unnecessarily.





Follow the instructions in paragraph 11 and use the keys  is possible to move quickly between the digits using the SHIFT key  Confirm the value by pressing the SET/PROG button  again. The display shows the parameter "tm" (max. temperature) in the top right-hand corner, briefly press the SET/PROG key  move on to the next parameters. When you reach the AL (alarm) parameter, set the minimum temperature value above which you want the instrument to go into an overtemperature alarm by pressing the keys  You can move quickly between the digits using the SHIFT key . Confirm the value by pressing SET/PROG button again.

13. Temperature offset on single point, on entire range, on room temperature sensor

The instrument allows the user to set the offset values, i.e., the calibration values, on a temperature point, on the entire temperature range and on the room temperature range.

NOTE: *although they can be modified by the operator, these values are already set by the factory and perfectly calibrated with certified measuring instruments and Accredia references. It is therefore advisable not to modify these values unless strictly necessary, for example, if a certified digital thermometer reveals inconsistencies between the temperature readings of the instrument and those taken by the thermometer itself.*



Follow the instructions in paragraph 11 and use the keys  to set the password 0003. You can move quickly between the digits using the SHIFT key . Confirm the value by pressing SET/PROG  again. The display will show the parameter "tm" (max temperature) in the top right-hand corner, briefly press the SET/PROG  key to move on to the next parameters until the desired ones are reached.

PARAMETER	DESCRIPTION
Pb	By modifying this parameter, it is possible to correct the reading of the PT100 temperature sensor inside the instrument to a single temperature point. The correction will therefore be referable to only one specific point.
PK	By modifying this parameter, it is possible to correct the reading of the PT100 temperature sensor inside the instrument over the entire temperature range, i.e., it is possible to vary the inclination of the reading range of the sensor itself.
PA	By modifying this parameter, it is possible to correct the reading of the PT100 room temperature sensor installed on the instrument (refrigerated versions only) to a single temperature point. The correction will therefore be referable to only one specific point.

14. Cleaning and maintenance

A correct maintenance and cleaning of the instrument ensure that it remains in good condition.

• Cleaning the outside of the instrument





It is not necessary to interrupt the operating cycle to clean the external surfaces of the instrument.

Also take care not to inadvertently disconnect or damage the power cable.







It is recommended that external surfaces are cleaned with a normal all-purpose cleaner sprayed onto a soft dampened cloth, so that it is not used in concentrated form. Before proceeding with cleaning or decontamination, the user must ensure that the method used does not damage the instrument.

• Cleaning the inside of the instrument

To completely clean the instrument and its shelves, it is necessary to interrupt the operating cycle and switch off the instrument using the ON / OFF switch on the side control panel.

 DANGER	
  	<p>Danger of electric shock and death</p> <ul style="list-style-type: none"> Ø DO NOT spray water or cleaning agents onto the interior and exterior surfaces. Ø Switch off the main switch and pull out the mains plug before cleaning. <p>➤ Dry the instrument completely before switching it on again.</p>

Before cleaning, open the instrument and wait until the internal chamber reaches room temperature. The internal chamber of the instrument is made of stainless steel, so it can be cleaned with any detergent as long as it is not aggressive and/or corrosive. It is recommended that internal surfaces are cleaned with a normal all-purpose cleaner sprayed onto a soft dampened cloth, so that it is not used in a concentrated form. Before proceeding with any cleaning or decontamination, the user must ensure that the method used does not damage the instrument.

 WARNING	
	<p>Danger of corrosion - Damage to equipment</p> <ul style="list-style-type: none"> Ø DO NOT use cleaning agents containing acids or halides. Ø DO NOT use neutral cleaning agents on other surfaces (e.g., on galvanised parts of the hinges or the rear wall of the housing).
   	<p>Eye contact - Eye damage caused by chemical burns</p> <ul style="list-style-type: none"> Ø DO NOT discharge into the sewage system. <p>➤ Wear protective goggles.</p>

- **Checking and cleaning the cooling unit compartment, heat sink and fan**

To check the compartment of the refrigerating units and its components, it is necessary to interrupt the operating cycle, switch off the instrument using the ON/OFF button on the side control panel and disconnect the power cable from the electrical socket. Then wait the time necessary for the heat sinks and refrigerating units to cool down (at least 30 minutes) before proceeding with the inspection. Remove the grating panel at the bottom of the front of the instrument (Figure 2) by unscrewing the fixing screws and access the compartment. Check that the compartment of the refrigerating units and the various components are clean, check that the exchange surface of the heat sinks is well cleaned and that there are no bent metal fins. If cleaning is necessary, take particular care not to bend these fins. It is advisable to use a normal vacuum cleaner, taking care to keep far away the suction nozzle. For the other parts, use a soft cloth and a non-aggressive and/or corrosive detergent, not pure but always diluted with water. Reposition the front grille panel (Figure 2) in its place and tighten the fixing screws.

IMPORTANT: If the instrument is to be sent for service, it should be properly cleaned and possibly decontaminated from pathogens. It is also advisable to return the instrument in its original packaging to the repair service and if this is not possible to pack it adequately for transport. Any damage caused by incorrect shipment will not be covered by warranty.

15. Warranty

Under normal use this instrument is guaranteed for a period of 24 months from the date of purchase.

The warranty is valid only if the product purchased remains original. It does not apply to any product or parts thereof that have been damaged due to incorrect installation, improper connection, misuse, accident or abnormal operating conditions. No liability is accepted for damages caused by improper use, lack of maintenance and unauthorised modifications.

16. Disposal of electronic equipment



This equipment is subject to the regulations for electronic devices.
Dispose of in accordance with local regulations.

