

Temperature Project



ARGO LAB



After many years in the Italian market and with a big experience in heating system for laboratory with high performance instruments, we decided to introduce new instruments more simple with lower price and less power consumptions.

Instruments for everyday use, more efficient and more environment friendly, able to contrast the effects of the crisis and ensure the necessary savings of environmental and economic resources. We present thus the new line of ovens and incubators **ARGO LAB**, faithful companions in your laboratory for a modern challenge of sustainable progress.

We do not want to forget these words!

"We didn't inherit the Earth on which we live from our ancestors, but we borrow it from our children."

These words, taken from a speech of Chief Indian tribe Seattle, are one of the more used citations in field of ecology, but despite being mentioned more and more often, with the same easiness and frequency it is forgot.

We do not want to forget these words!

It's now clear to all that we have to work globally to repair the damage that our planet is suffering and continues to suffer since too many years and it's a common responsibility pursuit a sustainable development.

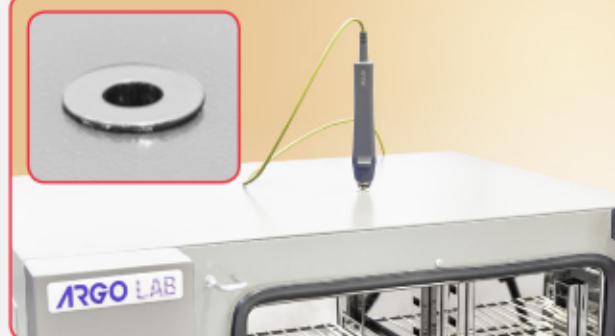
The crisis that pervades for years all the economic sectors should not be an obstacle, but rather constitutes a stimulus for research, technological innovation, development of industrial processes and quality of products.

Efficiency, low energy consumptions and precise control of temperature, these are the key characteristics of the new ovens and incubators ArgoLab.

Single test for each instrument

All the ovens and incubators ArgoLab are supplied with calibration report executed by instrument Accredia certificated.

The incubators are tested at 37 °C, the ovens at 150 °C.



The PT100 probe installed inside the chamber ensures a precise control of the temperature. However all the instruments are provided with a pass through hole diameter of 5 mm in order to install inside the chamber one or more probes for checking the temperature.



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CERTIFICATO DI TARATURA DELLO STRUMENTO CERTIFICATE OF CALIBRATION OF THE INSTRUMENT

STRUMENTO DI RIFERIMENTO / REFERENCE INSTRUMENT
Datalogger SPY RF Referenz (note: A43449), più sonda PT100 (note: 31238).
Datalogger SPY RF Referenz (note: A43449), più PT100 probe (note: 31238).

Contra temperatura di riferimento, certificato ACCREDIA presso il Centro LAT n°123.
Certificate of calibration, certified ACCREDIA presso il Centro LAT n°123.

MODALITÀ OPERATIVA / OPERATING MODE
Verifica dell'eventuale differenza tra la temperatura interna all'apparecchio e la temperatura impostata, sulla base delle modalità operative imposte dalla normativa per gli strumenti tarati secondo la ISO 17025.

Verifies the possible difference between the temperature inside the device and the set temperature and the control set in accordance with the operating procedures imposed by legislation for testing laboratory instruments ISO 17025.

CONDIZIONI AMBIENTALI DI MISURA / CONDITION OF MEASUREMENT
Temperatura: 20 °C
Umidità relativa: 50 %
Rilevatore: 50 %

RISULTATI DEL TEST / TEST RESULTS

Strumento controllato / Checked instrument	Matricola / Serial no.	Data / Date	Accertatore / Inspector
10N 35	10000000	20/11/2013	Mario Rossi
Temperatura impostata / Set temperature [°C]	Temperatura visualizzata / Displayed temperature [°C]	Temperatura misurata dal riferimento / Measured temperature by reference [°C]	Differenza / Difference [°C]
37.0	37.0	37.0	0.0



New controllers for each application

Basic and **Professional**, the new versions of the **ARGO LAB** line regulators, allow an easy setting of all operating parameters and an optimal temperature control.

The large backlit display clearly shows in every moment the temperature set and that one inside as well as other parameters.

The introduction of user friendly icons makes interpretation of the functions and commands extremely intuitive. Moreover the limited number of adjustment keys ensures operability very simple and intuitive.

ARGO LAB new controllers, user friendly interface for each application!

Basic



- Wide backlit LCD display
- Icons easy to read
- Timer and continuous function
- Visual and sound alarm
- Fan speed control (High, Medium, Low)
- Delay of starting
- Safety temperature limiter for samples protection

Professional



- **7 programs x 10 steps**
- Wide backlit LCD display
- Icons easy to read
- Visual and sound alarm
- Fan speed control (High, Medium, Low)
- **Repeatable work cycles**
- Delay of program starting
- Safety temperature limiter for samples protection



Safety class 3.1 (refer to normative DIN 12880)

Double safety switch. In case of exceeding of the set temperature with the primary switch, the safety control of the temperature is carried out by the secondary one, which operates at a variable temperature slightly higher than that of work. A further upper limit is controlled by a switch with fluid expansion.



- 1 Maximum temperature limit with fluid expansion adjustable controller
- 2 Maximum settable temperature
- 3 Maximum settable work temperature (Setting Menu)
- 4 Set temperature
- 5 Safety range (+10 °C)
- 6 Current temperature

Natural convection oven

from +5 °C over room temperature to +300 °C

TCN 30 - TCN 50 - TCN 115 - TCN 200



OVENS



TCN 30

TCN 50

TCN 115

TCN 200

Ideal for everyday use in the processes of drying and sterilization, the natural convection ovens Argolab are characterized by a high load capacity and by the accuracy in temperature control.

The possibility to heat the samples up to 300 °C allows any type of sterilization process.

The minimum heating times, the heating power properly dimensioned and the perfect tightness of the seals, ensure low energy consumption in every application.



Wheels for ICN 200, TCN 200, TCF 200, TCF 400.



Holed platform applicable to wire shelves for TCN and TCF models

Part n.	Description
41100192	Holed platform for TCN 30
41100152	Holed platform for TCN 50 / TCF 50
41100162	Holed platform for TCN 115 / TCF 120
41100172	Holed platform for TCN 200 / TCF 200
41100182	Holed platform for TCF 400
41101172	Wheels for ICN 200, TCN 200, TCF 200, TCF 400. Set of 4 pieces

The door seal ensures a perfect sealing even at highest temperatures. The heat losses are thus reduced to a minimum enabling efficient heating cycle.

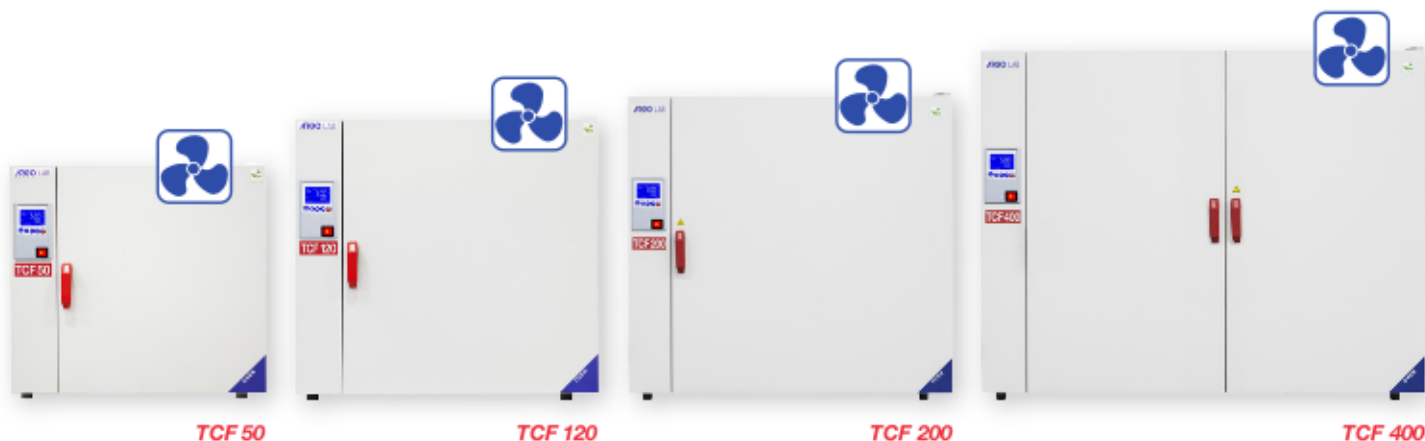
Natural convection ovens	TCN 30	TCN 50	TCN 115	TCN 200
Usable volume	30 liters	50 liters	115 liters	200 liters
Max temperature / Resolution	+200 / 0,1 °C	+300 / 0,1 °C	+300 / 0,1 °C	+300 / 0,1 °C
Temperature homogeneity at 150 °C	± 3,5 °C	± 3,5 °C	± 3,5 °C	± 4,0 °C
Temperature variation at 150 °C	± 0,5 °C	± 0,5 °C	± 0,5 °C	± 0,7 °C
Heating up time at 150 °C	14 min.	16 min.	18 min.	20 min.
Timer	99:59 hh:min and ∞	99:59 hh:min and ∞	99:59 hh:min and ∞	99:59 hh:min and ∞
Safety class	3.1	3.1	3.1	3.1
Power supply / Nominal wattage	230 V / 700 W	230 V / 1000 W	230 V / 1900 W	230 V / 2100 W
Internal dimensions (W x H x D)	320 x 320 x 285 mm	400 x 420 x 330 mm	520 x 495 x 450 mm	650 x 640 x 495 mm
Number of shelves (standard/max)	2/3	2/5	2/6	2/9
Useful min. distance between shelves	50 mm	50 mm	50 mm	50 mm
Max load for shelf	10 kg	15 kg	20 kg	20 kg
External dimensions (W x H x D)	460 x 685 x 530 mm	665 x 635 x 470 mm	790 x 750 x 600 mm	915 x 905 x 660 mm
Weight	40 kg	53 kg	74 kg	103 kg
Part number - BASIC version	41100062	41100002	41100012	41100022
Part number - PROFESSIONAL version	-	41100312	41100322	41100332



Forced air ovens

from +10 °C over room temperature to +300 °C

TCF 50 - TCF 120 - TCF 200 - TCF 400



The forced air ovens TCF 50, TCF 120, TCF 200, TCF 400 control very efficiently the temperature starting from 10 °C above ambient temperature up to 300 °C.

The PID controller, with wide backlit color display, clearly shows in every moment the temperature set and that one inside as well as other parameters.

The forced air circulation, adjustable in three levels (High, Medium, Low), guarantees a perfect air replacement and homogeneity of temperature in every parts of the chamber. A through hole of 5 mm diameter supplied as standard on the top side of the oven permits to introduce an external probe for the check of temperature or certification of the instrument.



The wire shelves with no overturning system and their fixing devices completely removable permit a very easy cleaning of the internal walls of the chamber.

Forced air ovens	TCF 50	TCF 120	TCF 200	TCF 400
Usable volume	50 liters	120 liters	200 liters	400 liters
Max temperature / Resolution	+300 / 0,1 °C	+300 / 0,1 °C	+300 / 0,1 °C	+300 / 0,1 °C
Temperature homogeneity at 150 °C	± 2 %	± 2 %	± 2 %	± 2 %
Temperature variation at 150 °C	± 0,3 °C	± 0,3 °C	± 0,4 °C	± 0,5 °C
Heating up time at 150 °C	20 min.	24 min.	30 min.	50 min.
Timer	99:59 hh:min and ∞	99:59 hh:min and ∞	99:59 hh:min and ∞	99:59 hh:min and ∞
Safety class	3.1	3.1	3.1	3.1
Power supply / Nominal wattage	230 V / 980 W	230 V / 1900 W	230 V / 2400 W	230 V / 3200 W
Internal dimensions (W x H x D)	400 x 415 x 310 mm	520 x 530 x 435 mm	645 x 650 x 495 mm	1000 x 800 x 500 mm
Number of shelves (standard/max)	2/5	2/7	2/9	2/10
Useful min. distance between shelves	50 mm	50 mm	50 mm	50 mm
Max load for shelf	15 kg	20 kg	20 kg	20 kg
External dimensions (W x H x D)	665 x 635 x 570 mm	785 x 750 x 690 mm	920 x 870 x 755 mm	1260 x 1060 x 750 mm
Weight	54 kg	74 kg	103 kg	160 kg
Part number - BASIC version	41100202	41100212	41100222	41100232
Part number - PROFESSIONAL version	41100402	41100412	41100422	41100432

Natural convection incubators

from +5 °C over room temperature to +70 °C

ICN 16 - ICN 35 - ICN 55



ICN 16



ICN 35



ICN 55

The organic materials used in the typical laboratory applications require a constant and soft heating. The temperature distribution in the Argolab incubators is obtained without forced air circulation but using only the natural convection, which does not stress the sample and allows its uniform growth.

The wide door glass window allows a constant monitoring of the status of the samples inside the chamber without opening the door, thereby avoiding unnecessary heat loss and temperature changes.

Natural convection incubators	ICN 16	ICN 35	ICN 55
Usable volume	16 liters	35 liters	55 liters
Max temperature / Resolution	+70 / 0,1 °C	+70 / 0,1 °C	+70 / 0,1 °C
Temperature homogeneity at 37 °C	± 0,4 °C	± 0,4 °C	± 0,5 °C
Temperature variation at 37 °C	± 0,3 °C	± 0,3 °C	± 0,3 °C
Heating up time at 37 °C	18 min.	22 min.	25 min.
Timer	99:59 hh:min and ∞	99:59 hh:min and ∞	99:59 hh:min and ∞
Safety class	2	2	2
Power supply / Nominal wattage	230 V / 85 W	230 V / 125 W	230 V / 250 W
Internal dimensions (W x H x D)	270x 230 x 255 mm	360 x 300 x 320 mm	400x 360 x 385 mm
Number of shelves (standard/max)	2/6	2/6	2/5
Useful min. distance between shelves	25 mm	30 mm	50 mm
Max load for shelf	5 kg	7,5 kg	10 kg
External dimensions (W x H x D)	505 x 370 x 400 mm	595 x 440 x 460 mm	635 x 500 x 545 mm
Weight	23 kg	33 kg	42 kg
Part number - BASIC version	41101002	41101012	41101022
Part number - PROFESSIONAL version	41101202	41101212	41101222



Overlapping incubators



For a better uniformity of the temperature, the wireheating system is positioned on all the internal walls of the chamber.



Natural convection incubators

from +5 °C over room temperature to +70 °C

ICN 120 - ICN 200



ICN 120



ICN 200

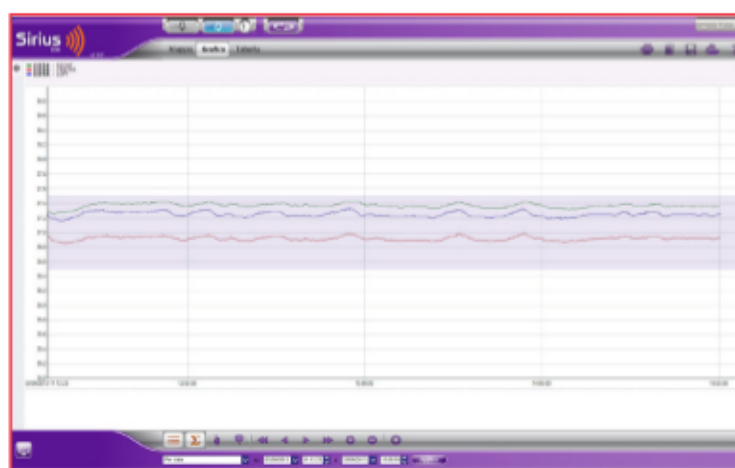
Argolab incubators with greater volume, thanks to the optimal placing of the heating elements, ensure high performance in homogeneity and stability of temperature and the proper incubation of the samples.

The difference from the smaller models is the presence of the double door, with the inner glass full-width, which ensures a perfect observation of the samples in the chamber without unnecessary heat losses.

Natural convection incubators	ICN 120	ICN 200
Usable volume	120 liters	200 liters
Max temperature / Resolution	+70 / 0,1 °C	+70 / 0,1 °C
Temperature homogeneity at 37 °C	± 0,5 °C	± 0,5 °C
Temperature variation at 37 °C	± 0,3 °C	± 0,3 °C
Heating up time at 37 °C	30 min.	35 min.
Timer	99:59 hh:min and ∞	99:59 hh:min and ∞
Safety class	2	2
Power supply / Nominal wattage	230 V / 350 W	230 V / 600 W
Internal dimensions (W x H x D)	520 x 460 x 500 mm	610 x 600 x 575 mm
Number of shelves (standard/max)	2/7	2/9
Useful min. distance between shelves	50 mm	50 mm
Max load for shelf	10 kg	10 kg
External dimensions (W x H x D)	755 x 610 x 645 mm	850 x 755 x 710 mm
Weight	61 kg	77 kg
Part number - BASIC version	41101032	41101042
Part number - PROFESSIONAL version	41101232	41101242



Internal glass door



Graphic example of the stability and homogeneity of the temperature in the incubator ICN16. It was obtained positioning three PT 100 probes equidistant on the shelf at the centre of the chamber

Cooled incubator

from 0 °C to +60 °C

IC 150-R



IC 150-R

The cooled incubator Argolab IC 150-R is ideal for every application in microbiological field.

The wide range of temperature allows the growth of microorganisms in every environmental situation.

The stainless steel chamber with rounded corners and removable shelves, make the sanitification operations easy.

The PID regulator guarantee an excellent control by microprocessor and the limited number of setting keys ensures an extremely simple and intuitive operability.

The instrument is standard equipped with a side through-hole diameter of 25 mm in order to install one or more temperature sensors inside the chamber.

The inner lamp for observation of the samples is standard supplied.



Chamber and shelves in stainless steel.
Inner lamp standard supplied

Cooled incubator

IC 150-R

Usable volume	150 liters
Temperature range	0 ~ +60 °C
Resolution	0,1 °C
Temperature 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 / Nominal wattage	230 V / 700 W
Internal dimensions (W x H x D)	500x 800 x 360 mm
Number of shelves (standard/max)	3/9
Useful min. distance between shelves	50 mm
Max load for shelf	10 kg
External dimensions (W x H x D)	650 x 1350 x 620 mm
Weight	100 kg
Part number - BASIC version	41101512
Part number - PROFESSIONAL version	41101522



Wide LCD display backlit



Shaking incubator

from +5 °C over room temperature to +60 °C

SKI 4



SKI 4



The SKI 4 combines in one instrument two typical laboratory operation: shaking and incubation of samples. Combining the convenience of a benchtop incubator and a shaker, it is ideal for cell culture, solubility studies, extraction procedures and many other laboratory applications. The SKI 4 is supplied with a standard platform equipped of flexible springs that can accommodate many type of flasks, becker, tubes with different sizes.

Shaking incubator	SKI 4
Max temperature / resolution	+60 / 0,1 °C
Temperature homogeneity at 37 °C	± 0,5 °C
Temperature variation at 37 °C	± 0,1 °C
Timer	99:59 hh:min and ∞
Air circulation	Forced
Speed	40...300 rpm
Amplitude of movement of platform	20 mm
Capacity of standard platform	7 flasks of 500 ml / 4 flasks of 1000 ml
Usable size of standard platform	320 x 320 mm
Safety class	3.1
Nominal wattage	500 W
External dimensions (W x H x D)	500 x 470 x 610 mm
Thickness of hood / material	8 mm / plexiglass
Weight	40 kg
Safety temperature control	yes
Safety control opening door	yes
Part number	41102012



Holed platform for clips fixing with 9 clips for 500 ml flasks

Part n.	Description
41102112	Holed platform for fixing clips
41102132	Clips for flasks of 100 ml (max 16 for platform)
41102142	Clips for flasks of 200 / 250 ml (max 9 for platform)
41102152	Clips for flasks of 500 ml (max 9 for platform)
41102162	Clips for flasks of 1000 ml (max 4 for platform)





CH 150

The climatic chamber Argolab is the ideal instrument to do stability and aging test on materials, simulation of environmental conditions and stress test in several fields such as: industry, food, textile, packaging, rubber/plastics, etc.

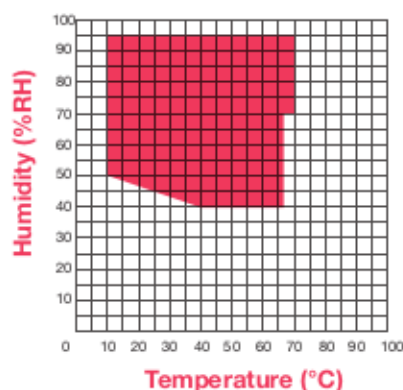
Thanks to the digital control by PID regulator of the temperature and of the humidity percentage, it's possible simulate many environmental situations and use of materials, and moreover test the forced aging effects. The external steel door is equipped of a wide glass window that permits the observation of the materials during test.

The stainless steel chamber with rounded corners, the shelves and their fixing system completely removable, make the chamber perfectly cleanable and sanificable.

A LED inner lamp for observation of the samples is included.

The standard supplied side through hole of 25 mm diameter allows to install probes inside the chamber.

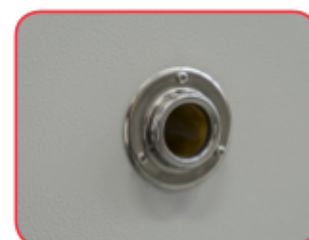
Digital backlit alphanumeric LCD screen. Digital timer, clock and date for GLP functions. Standard supplied mini printer for operating and set parameters output. Safety class 3.1 with double digital limiter of temperature and additional fluid expansion limiter



Temperature-humidity working range



External water tank for humidity generator, supplied as standard



Side through hole of 25 mm diameter to install probes inside the chamber

Climatic chambers	CH 150	CH 250
Usable volume	150 liters	250 liters
Temperature range	-10 ~ 85 °C (without humidity) +10 ~ 70 °C (with humidity)	-10 ~ 85 °C (without humidity) +10 ~ 70 °C (with humidity)
Resolution	0,1 °C	0,1 °C
Temperature homogeneity in the chamber	± 0,5 °C (without humidity) ± 1,5 °C (10 ÷ 70 °C / 40 ÷ 95% RH)	± 0,5 °C (without humidity) ± 1,5 °C (10 ÷ 70 °C / 40 ÷ 95% RH)
Temperature variation on a point	± 0,2 °C (without humidity) ± 0,5 °C (10 ÷ 70 °C / 40 ÷ 95% RH)	± 0,2 °C (without humidity) ± 0,5 °C (10 ÷ 70 °C / 40 ÷ 95% RH)
Humidity range	40 % ~ 95 %	40 % ~ 95 %
Humidity variation on a point	≤ 2% RH (10 ÷ 70 °C / 40 ÷ 95% RH)	≤ 2% RH (10 ÷ 70 °C / 40 ÷ 95% RH)
Timer / Programs	Continuous mode Programs 1-100 step	Continuous mode Programs 1-100 step
Safety class	3.1	3.1
Power supply / Nominal wattage	230 V / 2200 W	230 V / 2200 W
Internal dimensions (W x H x D)	550x 670 x 405 mm	600 x 830 x 500 mm
Number of shelves (standard/max)	3/10	3/12
Useful min. distance between shelves	45 mm	45 mm
Max load for shelf	10 kg	10 kg
External dimensions (W x H x D)	690 x 1520 x 790 mm	740 x 1680 x 885 mm
External water tank dimensions (W x H x D)	370 x 340 x 560 mm	370 x 340 x 560 mm
Weight	145 kg	185 kg
Part number	41101412	41101422

Waterbaths

from +5 °C over room temperature to +100 °C

WB 12 - WB 22 - WB 22 P - WB40 P



WB 12



WB 22 / WB 22 Pump

The waterbaths are generally used in the laboratory to maintain the temperature of the samples constant. The waterbaths Argolab WB series, thanks to the maximum operating temperature of 100°C, meet the different needs of operators and therefore allow them to be used in numerous applications.

The model WB 22 pump ensures a faster and more uniform temperature distribution due to the recirculation pump which is equipped.

Waterbaths	WB12	WB22	WB 22 Pump	WB 40 Pump
Usable volume	12 liters	22 liters	22 liters	40 liters
Max temperature / Resolution	+ 100 / 0,1 °C	+ 100 / 0,1 °C	+ 85 / 0,1 °C	+ 85 / 0,1 °C
Temperature homogeneity at 37 °C	± 0,5 °C	± 0,5 °C	± 0,2 °C	± 0,5 °C
Temperature variation at 37 °C	± 0,1 °C	± 0,1 °C	± 0,1 °C	± 0,2 °C
Recirculation pump	no	no	yes	yes
Timer	99:59 h:min and ∞	99:59 h:min and ∞	99:59 h:min and ∞	99:59 h:min and ∞
Overheating protection	yes	yes	yes	yes
Safety class	2	2	2	2
Bottom plate dimensions (W x D)	250 x 210 mm	450 x 270 mm	490 x 290 mm	620 x 380 mm
Minimum usable height with lid closed	150 mm	150 mm	150 mm	150 mm
Power supply / Nominal wattage	230 V / 900 W	230 V / 1100 W	230 V / 1100 W	230 V / 2200 W
External dimensions (W x H x D)	480 x 375 x 310 mm	680 x 395 x 365 mm	680 x 395 x 365 mm	830 x 385 x 460 mm
Weight	12 kg	18 kg	19 kg	28 kg
Part number	41101602	41101712	41101612	41101622
Rack distribution				

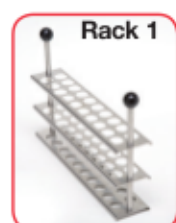
Part n.	Description	Modules
41101802	Rack 1 for tubes Ø 13 mm / 20 positions	1
41101812	Rack 2 for tubes Ø 18 mm / 20 positions	1
41101822	Rack 3 for tubes Ø 31 mm / 5 positions	1
41101842	Rack 4 for tubes Ø 56 mm / 8 pos. (biberon)	3
41101852	Rack 5 for blood bags / 5 positions	3



Plastified stand



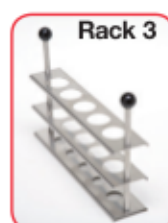
Holed bottom plate



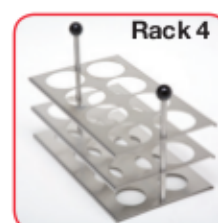
Tubes Ø13mm
one module



Tubes Ø18mm
one module



Tubes Ø31mm
one module



Tubes Ø56mm
three modules



for blood bags
three modules





www.argo-lab.com



Certified manufacturer ISO 9001

