

ACCURATE AND DURABLE
INCUBATORS

 **Froilabo**



INCUBATORS FOR A VARIETY OF APPLICATIONS

Froilabo offers a full range of incubators with natural convection, air forced or forced cooling to cover most laboratory applications.



Thermal disinfection cycle that runs at +160°C (Expert range)

Easy to clean with smooth internal stainless steel panels.



Cost effective

Component standardization and adaptation of heating power offer excellent value for money without compromising quality, security and accuracy.



Multiple applications

Our incubators meet the needs of biology, research, medical testing, environmental, food, pharmaceutical and cosmetic labs... whose requirements exceed the current standards.



Disinfection cycle

Froilabo incubators also provide a thermal disinfection cycle. The cycle runs at +160°C (+320°F) for 2.5 hours, offering an additional layer of bacteriological safety.



High safety standard

All our equipments have a very low heat emission and are tested to meet electrical safety standard IEC EN 60335-1, this standard is a public pledge to provide additional security for laboratories.



Easy clean design

All the incubators have a stainless steel tank with smooth walls to enable easy cleaning.



Robust & durable

Froilabo's Incubators are robust and durable due to their unique design and use of strong manufacturing materials.

BSP

Bio Static Performance Range

Natural Convection

Natural convection is suitable for long term incubation, incubation to protect potentially sensitive samples to desiccation, and also for powder and other applications.

Simplified control panel with 99h59m timer

Hands-free easy closing door design



BENEFITS OF THE BIO STATIC PERFORMANCE (BSP)

- Temperature range: ambient +7 °C to 65 °C (41°F to 149°F)
- Volume 65 to 245L
- Control probe Pt100 ohm
- Combined PID / Fuzzy logic regulation
- Dual digital display of the set-point and actual temperature to 0.1 of a degree
- Timer: 99h 59min
- Simplified control panel
- Pre-heated chamber (accurate temperature control preventing sample desiccation)
- Safety over-temperature according to **NF EN61010-2-010** (equivalent to DIN 3.1)
- High and low temperature alarm
- Visible alarm
- 2 anti-tip stainless steel shelves included (BSP65: 1)
- Multiple adjustable shelf positions
- "Real" hands free easy closing door design
- Stackable units (up to 125L)
- Inner safety glass door
- **Easycleaning** - inner stainless steel chamber (flat surface, removable shelf holders)
- Conform to **EN60068-3-11** and therefore to **NFX15-140**
- Individual quality control certificate
- **24 month warranty**



MODELS AVAILABLE

220-230V / 50Hz	65 L	125 L	245 L
Bio Static Performance, plain door	BSP65	BSP125	BSP245
Bio Static Performance, viewing door	BSP65PV	BSP125PV	BSP245PV

110V and 50-60Hz version available.

BP

Bio Performance Range

Forced Convection

Forced convection incubators offer high temperature precision and better homogeneity and stability. Forced convection significantly reduces the warm-up, stabilization and recovery time. Forced convection is recommended for full loads or frequent door opening.

Rapid temperature setpoint and homogeneity achieved with internal fan

2 anti-slip stainless steel wire shelves included*



BENEFITS OF THE BIO PERFORMANCE (BP) IN ADDITION TO THE BSP SPECIFICATION

- Excellent temperature uniformity (< 0.5°C at 37°C/ < 1°F at 99°F)
- Rapid temperature setpoint and homogeneity achieved with internal fan
- Heating of the chamber by forced convection, no risk of conduction and radiation: the air is introduced into the chamber at the set temperature
- Adjustable air control (0% to 100%), 35 mm rear exhaust
- Temperature range: ambient +5°C to 100°C/ 41°F to 212°F
- Volume 60 to 240L
- 2 anti-tip stainless steel wire shelves included (*BP 60: 1)
- Individual quality control certificate
- **24 month warranty**



MODELS AVAILABLE

220-230V / 50Hz	60 L	120 L	240 L
Bio Performance, plain door	BP60	BP120	BP240
Bio Performance, viewing door	BP60PV	BP120PV	BP240PV

110V and 50-60Hz version available.

BE

Bio Expert Range

When you need added functionality

The Expert range is based on the Performance model and includes a set of functions that enables users to perform more demanding applications without compromising functionalities and budget constraints.

Standard features will allow control of the different parameters: temperature, ventilation, temperature cycles... and also independent metrological calibration and qualification. Dry heat disinfection cycle will ensure optimum decontamination of the equipment.

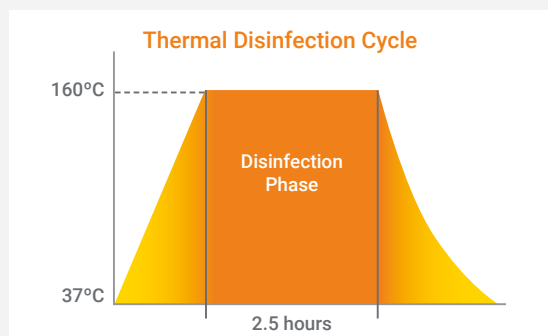
Added bacteriological safety with the thermal disinfection cycle

Adjustable fan speed, programmable controller and RS485 connectivity



BENEFITS OF THE BIO EXPERT IN ADDITION TO THE BP SPECIFICATION

- **Thermal disinfection cycle** 160°C (320°F) for 2.5 hours
- Cable entry port to enable validation and calibration with additional probes
- Programmable controller with 8 settings to enable temperature cycle up to 4 temperatures
- Ramp (°C/min) and temperature setup
- RS485 port for data transfer (optional software and cable to be ordered separately)
- **Adjustable fan speed**
- Audible and visible alarm
- 2 anti-tip stainless steel shelves included (BE60: 1)
- Individual quality control certificate
- **24 month warranty**



MODELS AVAILABLE

220-230V / 50Hz	60 L	120 L	240 L
Bio Expert, plain door	BE60	BE120	BE240
Bio Expert, viewing door	BE60PV	BE120PV	BE240PV

110V and 50-60Hz version available.

BRE

Bio Expert Refrigerated Range

Forced Convection Refrigerated

Ideal for micro-organisms, fungus, microbiological cultures at temperatures close to or below ambient, these incubators are suitable for wider application ranges. Once incubation is terminated, samples can be kept at +4°C after long term operation, overnight or weekend. They are perfect if used in variable environmental conditions.

Powerful refrigerating unit delivering effective, fast and precise cooling

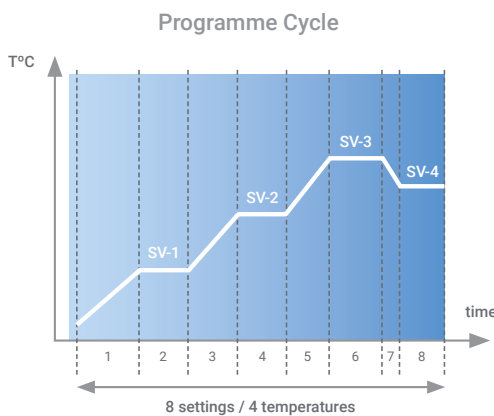
Temperature range: 0°C to 100°C* (32°F to 212°F)



BENEFITS OF THE BIO EXPERT REFRIGERATED (BRE) IN ADDITION TO THE BE SPECIFICATION

- **Powerful refrigerating unit** delivering effective, fast and precise cooling
- RS485 port for data transfer. Software, cable, adapter and USB protocol included
- **Thermal disinfection routine** 160°C (320°F) for 2.5 hours
- Temperature range: 0°C to 100°C* (32°F to 212°F)
- 2 anti-tip stainless steel shelves included (BRE60 : 1)
- Individual quality control certificate
- **24 month warranty**

* Set at 4°C (39°F) at the factory.



MODELS AVAILABLE

220-230V / 50Hz	60 L	120 L	240 L
Bio Expert Refrigerated, plain door	BRE60	BRE120	BRE240
Bio Expert Refrigerated, viewing door	BRE60PV	BRE120PV	BRE240PV

110V and 50-60Hz version available.

BP LV

Bio Performance Large Volume Range

Available in volumes of 414 litres or 735 litres

Forced Convection

Large volume forced convection incubators provide the user with better homogeneity and temperature stability, providing more space for your samples without compromising on quality.



BENEFITS OF THE BIO PERFORMANCE LARGE VOLUME RANGE

- Excellent temperature homogeneity ($\pm 0.3^{\circ}\text{C}$ at 37°C)
- Rapid temperature setpoint achieved with internal fan
- PID self regulating and self-adaptive programmable controller
- Heating of the chamber by forced convection, no risk of conduction and radiation: the air is introduced into the chamber at the set temperature
- Safety glass inner doors for better insulation
- Temperature range: ambient $+7^{\circ}\text{C}$ to 100°C / 44.6°F to 212°F
- Available in 2 volumes: 414L and 735L
- Air renewal adjustable on the front and rear exhaust
- Brushed stainless steel inner tank allowing easy cleaning
- Overtemperature safety class II according to the European standard **EN 61010-2-010** (DIN 3.1 equivalent)
- **24 month warranty**

2 anti-slip stainless steel wire shelves included



MODELS AVAILABLE

220-230V / 50Hz	414 L	735 L
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Bio Performance Large Volume

BP414

BP714

110V and 50-60Hz version available.



OPTIONS & SPECIFICATION

OPTIONS & CONFORMITIES

OPTIONS LIST

Pt 100 Ohm for data collection

Disc recorder

Electronic recorder

Locking door

Stainless steel perforated shelf

Additional \varnothing 50mm cable entry port

Stericycle decontamination program at over 150°C

Lowenstein trays

Wheels wraps

Basement with or without castors

SUPPLIED WITH

1 or 2 shelves (depending on model)

1 power cord

User manual

CERTIFICATION / CONFORMITIES

Equipment meets the specifications and CE compliant to EN60068-3-11

2014/35/UE – Low voltage directive

2014/30/UE – EMC directive, Class A device

SPECIFICATIONS

SPECIFICATIONS		NATURAL CONVECTION BSP			FORCED CONVECTION BP/BE			FORCED CONVECTION REFRIGERATED - BRE		
Model		65	124	245	60	120	240	60	120	240
Temperature Range		Amb +7°C to +65°C			Amb +5°C to +100°C			0°C to 100°C***		
Temperature uniformity +/- (°C)*	at 4°C	-	-	-	-	-	-	0.7	0.7	0.7
	at 37°C	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5
	at 44°C	-	-	-	0.7	0.7	0.7	-	-	-
	at 60°C	1.5	1.5	2	1	1	1	1	1	1
Temperature stability (°C)	at 37°C	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2
	at 44°C	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2
Time for temperature elevation (min)**	at 37°C	-	-	-	4.5	6	6	4.5	6	6
	at 44°C	-	-	-	6	7	7	6	7	7
	at 60°C	-	-	-	6	8	7.5	6	8	7.5
Recovery time after door opening of 30 secs (min)**	at 37°C	4 to 6	4 to 6	4 to 6	1	1	1	1	1	1
	at 44°C	-	-	-	1	1	1	1	1	1

ELECTRICAL	BSP			BP/BE			BRE		
IP rating	Front panel IP55			Front panel IP55			Front panel IP55		
Power supply	220-230V 50/60Hz 10A			220-230V 50/60Hz 10A			220-230V 50/60Hz 10A		
Power (W)	300	500	500	750	750	1500	1650	1650	2400

EXTERNAL DIMENSIONS	BSP			BP/BE			BRE		
Length (mm)	526	626	626	526	626	626	526	626	626
Height (mm)	640	750	1230	640	750	1230	910	1020	1500
Depth (mm)	579.5	679.5	679.5	579.5	679.5	679.5	579.5	679.5	679.5
Exterior depth (mm)	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5
Side clearance (mm)	100	100	100	100	100	100	100	100	100

INTERIOR DIMENSIONS	BSP			BP/BE			BRE		
Actual volume (L)	61	124	242	56	114	223	56	114	23
Length (mm)	400	500	500	400	500	500	400	500	500
Height (mm)	390	500	980	390	500	980	390	500	980
Depth (mm)	394	494	495	356	456	456	356	456	456
Shelves (standard/max)	1/6	2/10	2/18	1/6	2/10	2/18	1/6	2/10	2/18
Weight per shelf/total (kg)	20/50	20/70	20/90	20/50	20/70	20/90	20/50	20/70	20/90
Shelf dimensions L X D (mm)	380x320	480x430	480x430	380x320	480x430	480x430	380x320	480x430	480x430
Empty weight/Gross weight (kg)	39/54	53/71	79/100	40/54	55/71	82/100	71/85	88/94	114/132

* Not including measure uncertainties, FROILABO procedure : 9 points characterisation according to NFX15-140 norm

** 98% of the value

*** Set at 4°C (39°F) at the factory

Testing at an ambient temperature of 25°C and a variation in the supply Voltage of +/- 10%

SPECIFICATIONS

SPECIFICATIONS		FORCED CONVECTION BP LV	
Model		BP414	BP714
Temperature Range		Amb +7°C to 100°C	
Temperature uniformity +/- (°C)*	at 37°C	0.3	0.3
	at 50°C	1	1
Temperature stability (°C)	at 37°C	0.2	0.2
Time for temperature elevation (min)**	at 37°C	15	19
	at 50°C	25	30
Recovery time after door opening of 30 secs (min)**	at 37°C	2	4
	at 50°C	5	8

ELECTRICAL	BP LV	
IP rating	Front panel IP55	
Power supply	Voltage 230V ~ +/-10%, 50 Hz	
Power (W)	1500	2000

EXTERNAL DIMENSIONS	BP LV	
Length (mm)	1130	1130
Height (mm)	1170	1760
Depth (mm)	855	855
Exterior depth (mm)	100	100
Side clearance (mm)	150	150

INTERIOR DIMENSIONS	BP LV	
Actual volume (L)	414	735
Length (mm)	990	990
Height (mm)	760	1350
Depth (mm)	550	550
Shelves (standard/max)	2/10	2/17
Weight per shelf/total (kg)	70/140	35/180
Shelf dimensions L X D (mm)	975x475	975x475
Empty weight/Gross weight (kg)	210/240	240/280

* Not including measure uncertainties, FROILABO procedure : 9 points characterisation according to NFX15-140 norm

** 98% of the value

*** Set at 4°C (39°F) at the factory

TECHCOMP GROUP

In addition to Froilabo, Techcomp Europe comprises of the following companies:

