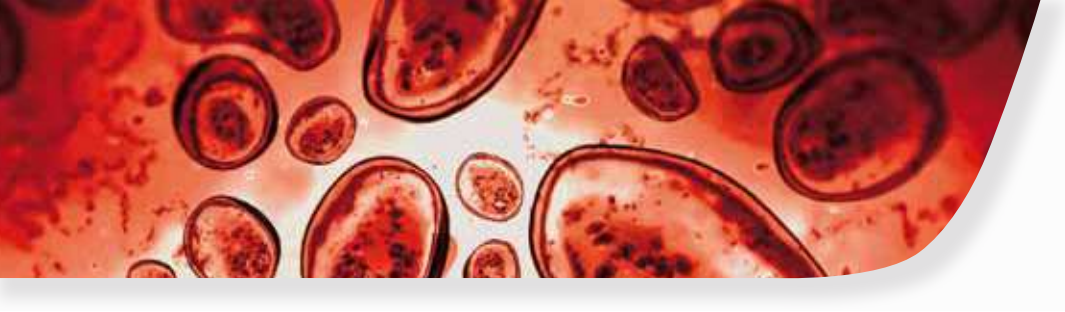


# O V E N S





# OVENS

**FROILABO** offer a wide range of ovens to meet 95% of laboratory applications. Ovens are used for drying, heating, resistance testing, and any other thermal test or treatment requiring high precision.

Component standardization and heating power variation offer you an excellent price performance ratio without compromise on quality, security and accuracy.

The **FROILABO** oven range has a convection fan which therefore saves considerable time during heating-up and offers a guarantee of perfect homogeneity, even with a full load. The internal stainless steel walls are flat to facilitate easy cleaning. Two door seals reduce heat conduction to the door. «Fuzzy Logic» technology adjusts heating control to meet the actual requirements at any given moment.

The **FROILABO** ovens are among the most efficient on the market and quickly reach the desired temperature. After door opening, the recovery time is very fast (up to 3 times faster than most existing products). Combined with low nominal power demand, these elements contribute to a reduced operating cost.

Special attention has been paid to the insulation quality and more specifically to the absence of unpleasant odours when operating the oven for the first time.

All our ovens are tested to meet electrical safety standard **IEC EN 60335-1**, this standard provides additional security for laboratories.



## The pioneer of the temperature control

- 1918 – Creation of the Couprie Company, the origin of our current activity
- 1920 – First centrifuge
- 1925 – First baby warmer for premature baby
- 1926 – First poupinel (sterilizer)
- 1927 – First bacteriological incubator
- 1948 – First low temperature equipment
- 1970 – First -86°C (-123°F) deep freezer
- 1979 – First Component Thermal Conditioner -80°C/+250°C (-112°F/+482°F)
- 2008 – First vented incubator with a disinfection cycle
- 2009 – Introduction of the predictive Intellidiag® system on -45°C/-86°C (-49°F/-123°F) deep freezers
- 2010 – First refrigerated vented incubator with a 160°C/2h30 disinfection cycle (320°F/2.50h)

Since 2009, **FROILABO** is a member of the Techcomp Group alongside other scientific manufacturers such as Precisa Gravimetrics in Switzerland.

With more than 100 years of experience in temperature and humidity control, **FROILABO** offers a product range from -86°C to 250°C (-123°F to -148°F) with precision and homogeneity rarely achieved by other manufacturers and in accordance to the only European norm in force: EN60068-3-11.

By using a **FROILABO** product, the end-user ensures its own security, protects its samples and takes care of the environment at the same time.

Our commitment to the environment is daily and is expressed by the selective use of “noble” material (stainless steel inner chamber), the use of recycled material (electroplated external case) and the recycling of all waste.

All **FROILABO** equipment is created and developed in France.

# AP

The Performance oven range has been developed to comply with all applications requiring speed, precision and homogeneity. It is specifically well adapted for drying, thermal tests and sterilisation. The high efficiency fan will allow you to save precious time.



## PERFORMANCE RANGE (AP)

- Temperature range: +10°C to +250°C (50°F to 482°F)
- Vented by a fan providing stability and excellent temperature homogeneity (<1°F at 158°F)
- Volumes of 60 to 240 Litre
- PT 100 ohm probe
- PID fuzzy logic regulator
- Timer : 99h 59min
- Chamber heating by convection, no risk of conduction or radiation (air inlet at temperature setpoint)
- Dual digital display of the oven setpoint temperature & actual temperature (0.1° precision)
- Simplified control panel
- Adjustable air entry (from 0 to 100%)
- Visual alarm
- «Hands free» easing closing door design
- 2 anti-tip stainless steel wire shelves included (BP60: 1)
- **EASYCLEANING stainless steel** inner chamber (flat surface, removable shelf holders)
- Stackable units (up to 120 litre)
- Conforms to **EN60068-3-11**
- Adjustable over temperature security device Class II as defined in the European norm **NF EN61010-2-010** (equivalent to DIN3.1).
- Individual quality control certificate
- **24 month warranty**



## To order

### 220-230V / 50Hz

	60L	120L	240L
Air Performance, plain door	AP60	AP120	AP240
Air Performance, viewing door	AP60PV	AP120PV	AP240PV

110V and 50-60Hz version available.

# AE

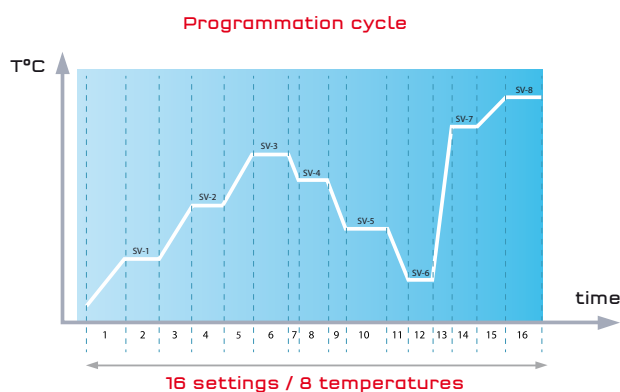
Based on the PERFORMANCE range, additional functions allow users greater capabilities to optimize their applications and oven control, whilst still offering great value.



## EXPERT RANGE (AE)

To the AP general specifications, the following features are added:

- Adjustable fan speed (25 to 100%)
- Audible alarm
- Cable entry ports to enable validation and calibration of the oven
- Programmable controller with 16 settings to enable temperature cycle up to 8 temperatures and 3 different cycles
- RS485 port for data transfer. Software, USB cable, protocol and adapter included
- 2 anti-tip stainless steel shelves included
- Individual quality control certificate
- **24 month warranty**



## To order

### 220-230V / 50Hz

Air Expert, plain door

Air Expert, viewing door

60L

AE60

120L

AE120

240L

AE240

AE60PV

AE120PV

AE240PV

110V and 50-60Hz version available.

# TECHNICAL DATA

SPECIFICATIONS PERFORMANCE/EXPERT		Ovens Convection		
		AP/AE60	AP/AE120	AP/AE240
Temperature range		Amb +10°C to 250°C		
Temperature uniformity +/- (°C)*	at 70°C	0,7	0,6	0,7
	at 150°C	1,5	1,4	1,5
	at 250°C	5	5	5
Temperature stability (°C)		0.2	0.2	0.2
Time for temperature elevation (min)**	at 70°C	8	9	10
	at 150°C	20	30	24
	at 250°C	38	50	45
Recovery time after door opening of 30 secs (min)**	at 70°C	1,5	2	2
	at 150°C	2,5	3	3,5
	at 250°C	3,5	4	4,5

## ELECTRICAL SPECIFICATIONS

IP rating	Front panel IP55		
Power supply	220-230V 50/60Hz 10A		
Power (W)	1000	1000	2000

## EXTERNAL DIMENSIONS

Length (mm)	526	626	626
Height (mm)	640	750	1230
Depth (mm)	579,5	679,5	679,5
Exterior depth (mm)	26.5	26.5	26.5
Side clearance (mm)	100	100	100
Height (mm) stackable kit	30	30	30

## INTERIOR DIMENSIONS

Actual volume (l)	58	118	230
Length (mm)	400	500	500
Height (mm)	390	500	980
Depth (mm)	370	470	470
Shelves standard/max (AP)	2/6 (1/6)	2/10	2/18
Weight per shelf/total (kg)	20/50	20/70	20/90
Shelf dimensions L X P (mm)	380x320	480x430	480x430
Empty weight/Gross weight (kg)	39/53	53/69	79/97

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

\*\* 98% of the value

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

## OPTIONS

Pt 100 ohm for data collection.  
Disc recorder.  
Electronic register.  
Locking door.  
Characterization 9 points according to EN60068-3-11.  
Stainless steel perforated shelf.

## ACCESSORIES

Wheels wraps.  
Basement with or without castors.

These equipments are  
produced on an ISO9001  
certified site.



**Froilabo**  
Precision for life

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