

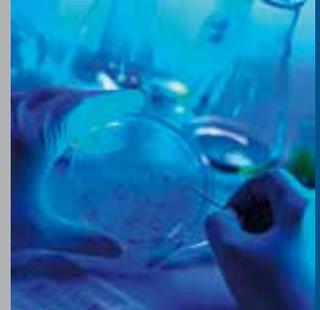


*Angelantoni*  
INDUSTRIE

MORE THAN TECHNOLOGY

Life Science Business Unit  
AS - Biomedical Equipment Division

Laboratory Refrigerators - Freezers  
FRL - FCL - Kryolab - Kryos Series



→ Angelantoni Industrie SpA manufactures a wide range of refrigerated cabinets and combined refrigerator - freezer to able meet the different needs of temperature, dimensions and storage capacity for laboratory, hospitals and pharmaceutical industries.

#### FRL Series /Optional

- Temperature chart recorder
- 23-50 mm port hole
- Shelf
- Drawer
- PT100 Probe



#### FCL Series /Optional

- Temperature chart recorder
- Alarm system
- 23-50 mm port hole



#### Kryolab Series /Optional

- Temperature chart recorder
- Alarm system



#### Kryos Series /Optional

- Temperature chart recorder
- Bioguard® Access Software
- PT100 Probe
- Serial Interface



# Laboratory Refrigerators - Freezers

## FRL - FCL - Kryolab - Kryos Series



- **Easy to clean and to use.**
- **Maximum convenience.**
- **Reliability of alarm system.**
- **Flexibility in the storage system.**





**ECO** → Basic Line.

### Technical features

#### Refrigerators /FRL e FRL M Models

**Structure** /Models fully metallic phosphate coated steel plate.

White epoxy powder painting to ensure durability.

Internal chamber abrasion proof special plastic.

**FRL** models are equipped with adjustable feet for proper positioning. **FRL M** models are provided with rollers for easy moving and adjustable feet for positioning.

**Door** /Made with same features of the frame, with variable hinge according to the needs. External key lock.

Possibility to have triple glass door.

**Shelves Grid** / Shelves adjustable in height.

**Inner lamp** /Door open courtesy light for glass door models only.

**Insulation** /Injected HCFC-free foamed polyurethane. The 50 mm thickness.

**Cooling system** /Completely sealed, silent and highly efficient hermetic compressor using ecological refrigerants.

Ventilated air condenser.

Internal ventilated evaporator.

**Regulation and control system** /**FRL**: External electronic thermostat for temperature adjustment. Electronic digital indicator installed on the door.

**FRL M**: Microprocessor control board HTWL.

Acoustic and visual high and low temperature alarms and acoustic alarm system for open door.

Remote alarms contacts.

Rechargeable back-up battery.

#### Combinated Refrigerators and Freezer /FCL Models

**Structure** /**FCL** models fully metallic phosphate coated steel plate.

White epoxy powder painting to ensure durability.

Internal chamber abrasion proof special plastic.

**FCL** models are equipped with adjustable feet for positioning.

**Door** /N° 2 doors made with same features of the frame, with variable hinge according to the needs. External key lock.

**Shelves - Drawers Grid** / Shelves adjustable in height and transparent plastic baskets for refrigerators compartment and plastic drawers.

**Inner lamp** /Door open courtesy light for refrigerator compartment only.

**Insulation** /Injected HCFC-free foamed polyurethane.

The 40 mm thickness for refrigerator compartment and 80 mm for freezer compartment.

**Cooling system** /Completely sealed, silent and highly efficient hermetic compressor using ecological refrigerants.

Ventilated air condenser.

Internal ventilated evaporator (for refrigerator compartment only).

**Regulation and control system** /Internal temperature for both compartment.

Each temperature compartment is controlled by electronic regulator.

01



## Technical specifications

Model	FRL			
	160 V	260 V	360 V	500 V
Nominal capacity (l)	160	260	360	500
Temperature range (°C)	+1 / +15		+2 / +14	
Supply voltage (V)*	208 - 230V /50Hz			
Maximum absorbed current (A)	0,8 / 1,2 (porta in vetro)	0,8 / 1,5 (porta in vetro)		1,5
Refrigerant	R600a			
External dimensions (mm)	600×620×850 (1070)	600×610×1250 (1470)	600×610×1640 (1860)	750×730×1640 (1860)
Internal dimensions (mm)	495×455×675	470×440×1062	470×440×1452	590×560×1452
Overall weight with standard packaging (Kg)	58 / 60	62 / 75	72 / 90	86 / 105
Noise level (dba)	43			

Model	FRL M			
	160 V-M	260 V-M	360 V-M	500 V-M
Nominal capacity (l)	160	260	360	500
Temperature range (°C)	+1 / +15		+2 / +14	
Supply voltage (V)*	208 - 230V /50Hz			
Maximum absorbed current (A)	0,8 / 1,2 (porta in vetro)	0,8 / 1,5 (porta in vetro)	1,5	
Refrigerant	R600Aa- R134a			
External dimensions (mm)	600×620×1070	600×610×1470	600×610×1860	750×730×1860
Internal dimensions (mm)	495×455×675	470×440×1062	470×440×1452	590×560×1452
Overall weight with standard packaging (Kg)	58 / 60	62 / 75	72 / 90	86 / 105
Noise level (dba)	43			

Model	FCL	
	300/2 TN-2TS V	400/2 TN-2TS V
Nominal capacity refrigerator compartment (l)	215	260
Nominal capacity freezer compartment (l)	100	
Temperature range refrigerator compartment (°C)	+1 / +9	
Temperature range freezer compartment (°C)	-15 / -32	
Supply voltage (V)*	208 - 230V /50Hz	
Maximum absorbed current (A)	2	
Refrigerant	R600a	
External dimensions (mm)	595×610×2020	595×610×2215
Internal dimensions refrigerator compartment (mm)	520×465×885	520×465×1075
Internal dimensions freezer compartment (mm)	425×405×600	425×405×600
Overall weight with standard packaging (Kg)	98	110
Rumorosità (dba)	48	

→ Illustration, description and technical data may be changed without notice. / (\*) 230V/60Hz and 115V/60Hz models are also available.

02 | 03

- 01. FRL 360 V-M with optionals.
- 02. FCL 300 and 400 with optionals.
- 03. FRL 360 V-M with glass door with optionals.





**ECO** → Basic Line.

## Technical features

01  
02



### Freezers /Kryolab e Kryos Models

**Structure** /Models fully metallic phosphate coated steel plate. White epoxy powder painting to ensure durability. Internal chamber in abrasion proof special plastic / aluminium sheet. Available vertical and chest model.

**Door** /Made with same features of the frame, with variable hinge according to the needs (vertical type only). External key lock. **KRYOS PLUS** model: door is equipped with **BIOGUARD®** a property transponder access control system that opens the door when an authorized user presents a badge or tag. In this way any operation relevant to the use of a freezer is completely under remote control.

**Baskets - Drawers** /Baskets for chest model and plastic drawers for vertical models will be supply.

**Inner lamp** /Door open courtesy light for chest model only.

**Insulation** /Injected HCFC-free foamed polyurethane.

**KRYOLAB V** (vertical model) and **KRYOS SH** (chest model) - 70 / 100 mm thickness.

**KRYOLAB H** (chest model) - The 60 mm thickness

**KRYOS SV** (vertical model) - The 70 mm thickness.

**Cooling system** /Completely sealed, silent and highly efficient hermetic compressor using ecological refrigerants. Ventilated air condenser. Internal evaporator.

**Regulation and control system /KRYOLAB:** external thermostat for the temperature control. External electronic digital indicator for the temperature visualization.

**KRYOS SH:** electronic digital display regulator/indicator, placed on the front control panel and complete with:

- Working temperature setting
- ON/OFF alarm system button
- Alarm system pilot lights
- Temperature digital display.

Electronic card control, placed on the control panel.

Audible and visual alarm system, independent from the control system.

The maximum alarm values are factory set.

The system is autonomous with a dedicated rechargeable battery.

**KRYOS SV:** microprocessor controller E2003, with two independent sections, the first one to set and control temperature, the second one to manage the alarm system and display temperature. Rechargeable buffer battery (12 V, 2Ah) to maintain the alarm system on for 48 hours in case of power outage.

Configured for a remote replication of alarms.

Optional RS 485/422/232 serial interface.

Optional **CRYOLOG** software for monitoring of equipment parameters and alarms.

# Technical specifications

Model	Horizontal Models		Vertical Models	
	KRYOLAB		300 V	500 V
Nominal capacity (l)	300	500	300	500
Temperature range (°C)	-15 / -30			
Supply voltage (V)*	208 - 230V /50Hz			
Maximum absorbed current (A)	1	1,3	1,1	1,6
Refrigerant	R600Aa / R134a		R600a / R134a	R600a
External dimensions (mm)	1000×760×915	1650×810×915	600×620×1645 (1865)	745×780×1725 (1945)
Internal dimensions (mm)	860×520×720	1445×500×670	410×410×1370	615×550×1500
Overall weight with standard packaging (Kg)	68	90	95	110
Noise level (dbA)	43			

Model	Horizontal Models		Vertical Models	
	KRYOS		500 SV	500 SV PLUS
Nominal capacity (l)	500 SH		500	
Temperature range (°C)	-25 / -50		-20 / -43	
Supply voltage (V)*	208 - 230V /50Hz			
Maximum absorbed current (A)	2,2		2	
Refrigerant	CARE 50		R404a	
External dimensions (mm)	1650×750×915		745×820×1965	
Internal dimensions (mm)	1445×550×670		615×550×1500	
Overall weight with standard packaging (Kg)	100		143	
Noise level (dbA)	<60		47	

→ Illustration, description and technical data may be changed without notice.  
 (\*) 230V/60Hz and 115V/60Hz models are also available.

03 | 04

- 01. Kryolab with optional.
- 02. Kryolab 500 V.
- 03. KRYOLAB 500 with chart recorder.
- 04. Kryos 500 SH.





M O R E T H A N T E C H N O L O G Y

Life Science Business Unit \_

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