



## MEDICAL REFRIGERATORS

LABORATORY AND PHARMACY  
REFRIGERATOR  
BLOOD BANK  
REFRIGERATOR  
LABORATORY FREEZER  
**DEEP FREEZER**  
PLASMA FREEZER  
COMBINED  
REFRIGERATOR  
AND FREEZER  
**COMBINED REFRIGERATOR**



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Should it be necessary of useful without undermining any model essential features,  
technical and stylistic characteristics are subject to be changed without manufactures's  
previous notice. Pictures don't necessarily show product in standard version.



as established in 1997,  
as result of twenty year experience of its owners  
in medical refrigeration field.

Constant research and development, along with  
professional and serious attitude have enabled **frimed**  
to design and manufacture highly reliable refrigerators  
and freezers to be used in hospital, laboratory,  
industrial biomedical and pharmaceutical fields as well  
as scientific field in general.

In few years our appliances have become well known  
and are now appreciated and chosen in many countries  
all over the world.





**frimed** has always been oriented to a constant improvement of the business process in order to satisfy the client, to involve its staff and to have a relationship of mutual satisfaction with suppliers. The commitment undertaken in this direction has enabled the company to achieve an important goal the certification of Quality Management System ISO 9001 which is a guarantee of reliability and professional attitude.



Further Quality Management System ISO 14001: certification confirms **frimed** serious commitment to minimize the environmental impact of procedures, products and services and attests the reliability of the Environmental Management System applied.



In 2010 **frimed** also achieved the certification of Quality Management System according to ISO 13485 (Medical Devices) for design, production and warranty service of blood bank refrigerators and plasma freezers.







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## ENERGY SAVING AND ENVIROMENT PROTECTION TECHNOLOGY

### LED LIGHTING

All our cabinets with positive temperature are internally equipped with LED lights. LED lighting is the solution for reducing energy use, because it allows saving energy up to 70% compared with fluorescent lamps. LED lights have high performance, bright colour and provide beneficial environmental impact with longer life and therefore less landfill waste.

### LOW EMISSIVITY GLASS

This technology applied to all models with glass door significantly improves performance of insulation allowing energy saving.

### CFC-FREE THERMO INSULATION

Insulation of all cabinets is done by means of ecological CFC-free polyurethane foam. Insulation thickness of 60mm for all refrigerator models and 80,100 mm for freezer models grants highly insulating performance.



### ENVIROMENT FRIENDLY REFRIGERANT GAS NATURAL GAS R290

CFC- free R452a gas is used in all compressors of frimed models. In addition we also offer compressors with natural gas R290 on all our models.

### ENERGY SAVING DEFROST CYCLE

In all ventilated refrigerators, defrosting cycles are performed only when necessary.

### HOT GAS DEFROSTING

for ventilated freezer AF70B and AF140B with a very short cycle with no need of electric resistance.

### HIGH PERFORMANCE MOTOR

fan granting energy saving thanks to new technology. Besides, **frimed** mainboard makes condenser fan work only when necessary.



## TECHNICAL HIGHLIGHTS

### STRUCTURE

External structure in hot-dip galvanised steel, anti-corrosion treated and PVC film coated. Stainless steel internal structure.

### INSULATION

Insulation of 60mm, 80mm, 100mm obtained by injection of high density ecological polyurethane CFC-free foam for excellent product preservation and best energy saving.

### DOOR

Self-closing door with removable magnetic gasket on four sides for perfect closing. Right hand opening or left hand on request.

### LOCK WITH KEY

To use the appliance under supervision. Optional electric digital key lock.

### LED LIGHTING

LED light with automatic switch at door opening. Manual switch on control panel.

### SHELVES

In Scotch-Brite stainless steel. Adjustable in height.

### DRAWERS (STANDARD ON BLOOD BANK REFRIGERATORS)

Sliding drawers in Scotch-Brite stainless steel. Plexiglas frontal side. Optional plexiglas dividers.

### REFRIGERATION SYSTEM

Completely sealed, silent and highly efficient hermetic compressor and ventilated air condenser. Internal ventilated or static evaporator. CFC-free refrigerant.

### DEFROSTING

Fully automatic defrosting cycle with auto-evaporation of condensed water, or manual defrosting cycle.

### DATA LOGGER

Electronic data logger with download of data on USB pen drive.

### TEMPERATURE CHART RECORDER (STANDARD ON BLOOD BANK REFRIGERATORS)

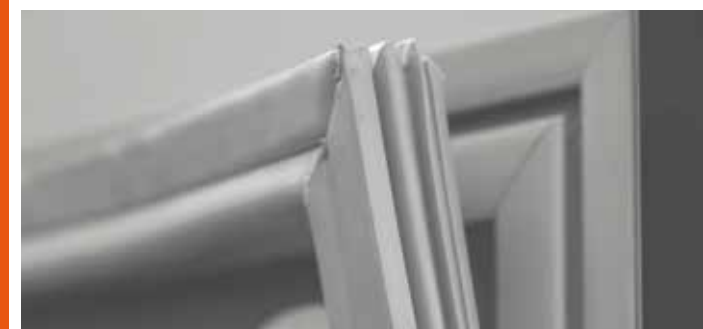
Weekly temperature recording system working with 1,5V battery. It is equipped with 52 disks and an ink pen.

### CASTORS WITH FRONTAL BRAKES (OPTIONAL)

Additional 10 cm to be considered on total height of appliance.

### TEST HOLE (OPTIONAL)

Ø 25 mm sidewall test hole for custom probe.





**CONTROL PANELS**

**LGK-2 Digital**



Microprocessor control panel with easy-to-read **digital display** showing inside menu, temperature, set point, date and hour, model of appliance.

Equipment settings and switching off only by means of **password**.

Continuous **temperature monitoring** with set point and alarms shown on display.

**Visual and acoustic alarms** through buzzer sound, general alarm warning light, specific alarm warning light and icon on display.

Alarms included: high and low temperature (adjustable threshold), open door, condenser efficiency, damaged probes, power failure, run-down battery.

**Back up battery** (optional) to show temperature on display and generate alarms in case of power failure.

**Remote contact** to connect the appliance to an external alarm.

**GSM module** (optional) to send SMS alarm messages showing date, time, cabinet temperature and type of alarm. Possibility to send SMS message to check correct functioning of cabinet.

**LAN port** (optional) to connect one or more appliances via ethernet on PC for monitoring correct functioning.

**USB port** to download temperature data and alarms or to reset the appliance.

**Data logger** to record temperatures of last 30 days. Download data on USB pen drive.

**Memory** for last 20 alarms shown on display.



**LGK-3 Touch**



Microprocessor control panel with **colour 4.3" LCD touch screen and keys**.

Setting and visualization with **0.1°C resolution**.

Display showing cabinet temperature, set point, date, hour, equipment model and electronic accessories.

Continuous **temperature monitoring**.

**Real time temperature graph** on display (to be activated by user).

**Password protected** power switch and settings.

**RS232/RS485** serial ports.

Digital calibration of probes.

**In/out 4-20 mA** converter module.

**Safety thermostat** (optional).

Two independent **PT1000** probes, the first one to set and detect temperature, the other one to manage the alarm system and display temperature.

**Visual and audible alarms** through buzzer sound, general alarm warning light and specific alarm warning icon on display.

Alarms of high and low temperature, open door, condenser efficiency, damaged probes, power failure at electricity recovery, power failure with recording of data and alarms generated by back-up battery (standard only on blood bank refrigerator and plasma freezer), damaged or flat battery.

**Memory** of latest alarms shown on display.

**Back-up Battery** (optional) to show temperature on display and to manage the alarm system in case of power failure.

**Remote contact** (dry, volt-free) to connect the equipment to an external alarm.

**GSM module** (optional) to send SMS alarms messages to mobile phones showing date, time, cabinet temperature and type of alarm. Possibility to send SMS messages from mobile phone to check correct functioning of equipment.

**LAN port** (optional) to connect one or more appliances via Ethernet on PC to monitor working state.

**USB port** to download temperature data and alarms and to upgrade or reset the appliance.

**Data logger** to record temperatures and alarms. Download data on USB pen drive.





## TP-1 Full Touch



Microprocessor control system equipped with:

- Display (Capacitive) **Touch Screen** True Color 4,3" or 7"
- **USB port** to downloading temperature data and alarms; software updates
- **LAN network connection** (wireless)
- **WiFi** 802.11n/g
- **RS485 serial port** between display and control board

The devices of this series are equipped with special functions for the optimization of defrosts and with functions that can be used to obtain energy saving of the unit.

There are 3 inputs for NTC temperature probes (evaporator, condenser, temperature internal chamber), and an input for PT100 probe dedicated to monitoring the internal temperature.

The system architecture is one I / O control card (controller card) and one interface card (4.3" TFT display card with capacitive touch screen).

The communication between the two boards takes place through an RS485 serial; the Controller board powers the Display board in low voltage (12V).

### WIFI MODULE

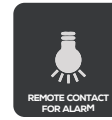
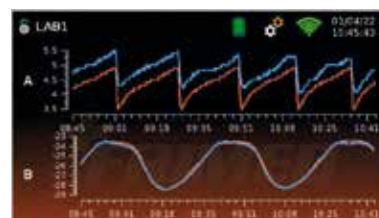
The wifi module is already included in the standard interface card (display) for possible connection to the cloud [optional with license]

### PASSWORD

The system is password protected at different levels:

- operator [normal user]
- control [control user]
- service [service user]
- factory [factory user]

Passwords (except the factory one, not accessible) can be customized to avoid improper use of the system. Videographic display of temperature trends, historical alarms that can be consulted directly on the display.



## TP-1 Full Touch

### ALARMS

The controller has an internal buzzer for acoustic signaling of alarms, a dry contact relay for remote alarm connection.

Acoustic-visual signaling (with red triangle alarm symbol) of the alarms, even in the power failure if equipped with a back up battery (optional), easy to understand thanks to a detailed list with the meaning of the alarm generated, including :

- High - low temperature
- Dirty condenser
- No power supply - power failure (if with battery as option)
- Open door
- Sensor failure
- Low battery charge (option)
- Communication alarm



Password protected switching on and off controller to avoid deactivation of the fridge by unauthorized personnel

### DATA LOGGER

Electronic recording system of temperature and alarm data, with large memory, downloadable on USB key. Sampling interval of 30sec or greater.

### CLOUD system (as option)

Connecting and remotely controlling the instrument will no longer be a problem. The electronic system has an integrated WIFI connection module. Once online, thanks to the specifically developed Cloud platform (optional, to be quoted), it is possible to remotely intervene on the unit. Available connection with VNC/Websocket technology that replicates the instrument interface on a PC giving full access to the instrument. The CLOUD system also simplifies the identification of any error directly remotely so as to allow the service to reduce or even cancel the intervention time and troubleshooting. The system allows archiving and downloading of historical temperature and alarm data. It is possible to receive by e-mail a pdf attachment containing the data download, both in graphic and numerical form. The dispatch can be daily, weekly or cadenced according to the operator's choice.

## CONNECTINFRI - CLOUD SYSTEM

### AVAILABLE ON TP-1 FULL TOUCH CONTROL PANEL

To correctly store medicines, vaccines, blood and general biological material, a "simple" refrigerator is not enough.

Today, more than ever, the optimal storage of biological material, medicines, and so on, has not only an economic but also a social value. **ConnectInFri**, is a specifically created cloud to connect and control your refrigerator or freezer remotely, with access via your mobile phone, tablet or computer. With secure password-protected access to the **ConnectInFri** platform, you can remotely view and access your refrigerator's control panel where you can view the parameters and change them if necessary.

**ConnectInFri** features:

#### 1. VNC (Virtual Network Computing) remote control:

this is the software application to access/control your refrigerator, thus allowing you to control the unit and use it as if you were standing right in front of it.

This aspect, which is unique in this field of application (Medical Refrigeration), has several extremely significant advantages in terms of efficiency, stored product control and cost savings, namely:

**a-** Possibility for the Service (or whoever is in charge of technical assistance) to control the machine without the end user having to intervene in any way to analyse the situation and reach a diagnosis of the possible problem without physically intervening on site.

**b-** Possibility to interact with the end user (e.g., co-worker/employee) without being physically present, in the event of functional or purely instructional problems.

#### 2. Data Backup

A backup of the unit's data has been implemented in the web clouding infrastructure. Naturally, it will always be possible to download such data directly from the unit itself, via the USB port on the display (circular queue of about 12 months), but it will also be possible to download and save such data within the portal itself (for 10 years).

#### 3. Automatic report sending

You can choose to automatically send an e-mail with the daily/weekly/monthly pdf report of the unit's **temperature/alarm data**, to an e-mail address set by the user

Through using **ConnectInFri**, the person in charge of the laboratory, technical department, etc., will be able to:

- View the operating progress of their equipment
- Remotely change the temperature
- Manage alarms
- Manage scheduled maintenance by means of programmable memos
- Analyse energy consumption
- Store data records in folders and print them out by selecting the desired period

#### **ConnectInFri** security

Communications are made through secure authentication.

All information (values, alarms, generator data) is stored in a secure, non-public database.

Passwords are irreversibly encrypted so that no one but the user can know the credentials.

The cloud guarantees the use of the most up-to-date security standards and is 100% compliant with the GDPR (General Data Protection Regulation).





## REFRIGERATOR

### LABORATORY AND PHARMACY

+2°+12°C FROM 100 TO 1400 LT.

#### SB-FS-PN-AF MODELS

##### STRUCTURE

External structure in hot-dip galvanised steel, anti-corrosion treated and PVC film coated. Stainless steel internal structure.

##### INSULATION

60 mm of insulation obtained by injection of high density ecological polyurethane CFC-free foam for excellent product preservation and energy saving.

##### DOOR

Self-closing solid or glass door (double insulating - low emissivity glass) with folding magnetic gasket (easy to replace) on four sides for perfect closing. Right hand opening or left hand on request. Lock with key.

##### SHELVES

Scotch-Brite stainless steel shelves, removable and adjustable in height.

##### LIGHT

LED light (energy saving up to 70%, ecological) with automatic switch at door opening. Manual switch on control panel.

##### TEMPERATURE RANGE

Between +2°C and +12°C. Factory preset to +4°C. Digital adjustable with an increment of 0.1°C

##### REFRIGERATION SYSTEM

Completely sealed, silent and highly efficient hermetic compressor and ventilated air condenser (suitable also for tropical countries). Forced-air cooling system conceived to achieve maximum temperature uniformity and stability inside the refrigerator even in case of frequent door openings. Evaporator fan shuts off during door opening. CFC-free refrigerant R452a or CFC/HCFC-free natural refrigerant R290.

##### DEFROSTING

Fully automatic defrosting cycle and auto-evaporation of condensed water.

##### CONTROL PANELS AVAILABLE:

LGK-2 digital control panel (page 10)  
 LGK-3 touch control panel (page 11)  
 TP-1 full touch control panel (page 12)

##### DATA LOGGER

Electronic recording system of temperatures and alarms. Download of data on USB pen drive.



#### STANDARD

- Shelves.
- Four one-way wheels with stabilizing adjustable feet.
- Power cord with Schuko type plug or British type plug.
- Protection fuses (on power switch and electronic mainboard).
- RFI filter.
- Password protected power switch and settings.
- Electronic control panel with alarm system.
- Remote contact (dry, volt-free) for alarm.
- Data Logger with USB port to download data.
- Memory of latest alarms visible on screen.
- Power failure alarm at electricity recovery.



#### OPTIONAL ACCESSORIES

- Scotch-Brite stainless steel sliding drawers with telescopic ball-bearing slides. Plexiglas frontal side.
- Kit of dividers for drawer.
- Additional shelf.
- Castors with frontal brakes (+ 10 cm on total height).
- Weekly temperature chart recorder.
- Back-up battery.
- GSM module to send SMS alarm messages to mobile phones (LGK-2/LGK-3).
- LAN port to connect the appliance via ethernet on PC.
- Cloud system (TP-1 full touch).
- Safety thermostat.
- Test hole (Ø 25 mm).
- Kit for DIN 13277 conformity (former DIN 58345).
- Electric digital key lock (LGK-3/TP-1 full touch).
- Power supply 115V/60Hz.
- Insulation of 80 mm. for AF models.





MODEL	SB10	SB10V	FS15	FS15V	FS20
<b>TECHNICAL DATA</b>					
Capacity (LT)	100	100	150	150	200
Temp. range (°C)	+2 / +12	+2 / +12	+2 / +12	+2 / +12	+2 / +12
Cooling type	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling
Defrost	Automatic	Automatic	Automatic	Automatic	Automatic
CFC-Free Refrigerant gas	R452a or R290	R452a or R290	R452a or R290	R452a or R290	R452a or R290
Noise level (db)	<45	<45	<45	<45	<45
CONTROL PANEL	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1
<b>VISUAL AND AUDIBLE ALARMS</b>					
High/Low temperature	√	√	√	√	√
Open door	√	√	√	√	√
Condenser efficiency	√	√	√	√	√
Damaged sensor	√	√	√	√	√
Power failure	optional	optional	optional	optional	optional
Full recording memory	√	√	√	√	√
SMS alarm message	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3
<b>FUNCTIONS</b>					
Password protected use	√	√	√	√	√
Remote alarm	√	√	√	√	√
Data logger	√	√	√	√	√
Wi-Fi	TP-1	TP-1	TP-1	TP-1	TP-1
RS232-RS485 serial port	√	√	√	√	√
4-20 mA converter module	LGK-3	LGK-3	LGK-3	LGK-3	LGK-3
Safety thermostat	optional	optional	optional	optional	optional
<b>ELECTRICAL DATA</b>					
Supply voltage (V/Hz)	230/50-230/60	230/50-230/60	230/50-230/60	230/50-230/60	230/50-230/60
Max absorbed current (W)	245	245	245	245	245
<b>INTERNAL EQUIPMENT</b>					
Shelves	2	2	2	2	3
<b>OPTIONAL ACCESSORIES</b>					
Drawer	max 2	max 2	max 3	max 3	max 4
Kit of dividers for drawer	√	√	√	√	√
Additional shelf	√	√	√	√	√
Cloud system	TP-1	TP-1	TP-1	TP-1	TP-1
Castors with frontal brakes	√	√	√	√	√
Temp.chart recorder	√	√	√	√	√
Back-up battery	√	√	√	√	√
GSM module	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3
LAN Port	√	√	√	√	√
Port hole	√	√	√	√	√
Electric Digital key lock	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1
Power supply 115V/60Hz	√	√	√	√	√
CERTIFICATION	CE	CE	CE	CE	CE
<b>DIMENSIONS (WxDxH - MM)/KG</b>					
External Dimensions/weight	600x600x860-57	600x600x860-60	600x600x1360-73	600x600x1360-78	600x600x1560-82
Packing Dimensions/weight (carton box)	700x700x1030-63	700x700x1030-66	700x700x1570-80	700x700x1570-85	700x700x1770-89



MODEL	FS20V	FS25	FS25V	FS30	FS30V
<b>TECHNICAL DATA</b>					
Capacity (LT)	200	250	250	300	300
Temp. range (°C)	+2 / +12	+2 / +12	+2 / +12	+2 / +12	+2 / +12
Cooling type	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling
Defrost	Automatic	Automatic	Automatic	Automatic	Automatic
CFC-Free Refrigerant gas	R452a or R290	R452a or R290	R452a or R290	R452a or R290	R452a or R290
Noise level (db)	<45	<49	<49	<49	<49
CONTROL PANEL	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1
<b>VISUAL AND AUDIBLE ALARMS</b>					
High/Low temperature	√	√	√	√	√
Open door	√	√	√	√	√
Condenser efficiency	√	√	√	√	√
Damaged sensor	√	√	√	√	√
Power failure	optional	optional	optional	optional	optional
Full recording memory	√	√	√	√	√
SMS alarm message	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3
<b>FUNCTIONS</b>					
Password protected use	√	√	√	√	√
Remote alarm	√	√	√	√	√
Data logger	√	√	√	√	√
Wi-Fi	TP-1	TP-1	TP-1	TP-1	TP-1
RS232-RS485 serial port	√	√	√	√	√
4-20 mA converter module	LGK-3	LGK-3	LGK-3	LGK-3	LGK-3
Safety thermostat	optional	optional	optional	optional	optional
<b>ELECTRICAL DATA</b>					
Supply voltage (V/Hz)	230/50-230/60	230/50-230/60	230/50-230/60	230/50-230/60	230/50-230/60
Max absorbed current (W)	245	360	360	360	360
<b>INTERNAL EQUIPMENT</b>					
Shelves	3	4	4	5	5
<b>OPTIONAL ACCESSORIES</b>					
Drawer	max 4	max 5	max 5	max 6	max 6
Kit of dividers for drawer	√	√	√	√	√
Additional shelf	√	√	√	√	√
Cloud system	TP-1	TP-1	TP-1	TP-1	TP-1
Castors with frontal brakes	√	√	√	√	√
Temp.chart recorder	√	√	√	√	√
Back-up battery	√	√	√	√	√
GSM module	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3
LAN Port	√	√	√	√	√
Port hole	√	√	√	√	√
Electric Digital key lock	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1
Power supply 115V/60Hz	√	√	√	√	√
CERTIFICATION	CE	CE	CE	CE	CE
<b>DIMENSIONS (WxDxH - MM)/KG</b>					
External Dimensions/weight	600x600x1560-86	600x600x1760-88	600x600x1760-93	600x600x1960-97	600x600x1960-102
Packing Dimensions/weight (carton box)	700x700x1770-93	700x700x1890-98	700x700x1890-103	700x700x2170-107	700x700x2170-112

specifications



MODEL	PN45	PN45V	PN52
<b>TECHNICAL DATA</b>			
Capacity (LT)	450	450	520
Temp. range (°C)	+2 / +12	+2 / +12	+2 / +12
Cooling type	Forced air cooling	Forced air cooling	Forced air cooling
Defrost	Automatic	Automatic	Automatic
CFC-Free Refrigerant gas	R452a or R290	R452a or R290	R452a or R290
Noise level (db)	<49	<49	<49
CONTROL PANEL	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1
<b>VISUAL AND AUDIBLE ALARMS</b>			
High/Low temperature	√	√	√
Open door	√	√	√
Condenser efficiency	√	√	√
Damaged sensor	√	√	√
Power failure	optional	optional	optional
Full recording memory	√	√	√
SMS alarm message	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3
<b>FUNCTIONS</b>			
Password protected use	√	√	√
Remote alarm	√	√	√
Data logger	√	√	√
Wi-Fi	TP-1	TP-1	TP-1
RS232-RS485 serial port	√	√	√
4-20 mA converter module	LGK-3	LGK-3	LGK-3
Safety thermostat	optional	optional	optional
<b>ELECTRICAL DATA</b>			
Supply voltage (V/Hz)	230/50-230/60	230/50-230/60	230/50-230/60
Max absorbed current (W)	336	336	336
<b>INTERNAL EQUIPMENT</b>			
Shelves	3	3	4
<b>OPTIONAL ACCESSORIES</b>			
Drawer	max 5	max 5	max 6
Kit of dividers for drawer	√	√	√
Additional shelf	√	√	√
Cloud system	TP-1	TP-1	TP-1
Castors with frontal brakes	√	√	√
Temp. chart recorder	√	√	√
Back-up battery	√	√	√
GSM module	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3
LAN Port	√	√	√
Port hole	√	√	√
Electric Digital key lock	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1
Power supply 115V/60Hz	√	√	√
CERTIFICATION	CE	CE	CE
<b>DIMENSIONS (WxDxH - MM)/KG</b>			
External Dimensions/weight	700x800x1840-120	700x800x1840-124	700x800x2040-134
Packing Dimensions/weight (carton box)	750x850x1980-134	750x850x1980-137	750x850x2180-149



MODEL	PN52V	AF70	AF70V	AF140	AF140V
<b>TECHNICAL DATA</b>					
Capacity (LT)	520	700	700	1400	1400
Temp. range (°C)	+2 / +12	+2 / +12	+2 / +12	+2 / +12	+2 / +12
Cooling type	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling
Defrost	Automatic	Automatic	Automatic	Automatic	Automatic
CFC-Free Refrigerant gas	R452a or R290	R452a or R290	R452a or R290	R452a or R290	R452a or R290
Noise level (db)	<49	<49	<49	<50	<50
CONTROL PANEL	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1
<b>VISUAL AND AUDIBLE ALARMS</b>					
High/Low temperature	√	√	√	√	√
Open door	√	√	√	√	√
Condenser efficiency	√	√	√	√	√
Damaged sensor	√	√	√	√	√
Power failure	optional	optional	optional	optional	optional
Full recording memory	√	√	√	√	√
SMS alarm message	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3
<b>FUNCTIONS</b>					
Password protected use	√	√	√	√	√
Remote alarm	√	√	√	√	√
Data logger	√	√	√	√	√
Wi-Fi	TP-1	TP-1	TP-1	TP-1	TP-1
RS232-RS485 serial port	√	√	√	√	√
4-20 mA converter module	LGK-3	LGK-3	LGK-3	LGK-3	LGK-3
Safety thermostat	optional	optional	optional	optional	optional
<b>ELECTRICAL DATA</b>					
Supply voltage (V/Hz)	230/50-230/60	230/50-230/60	230/50-230/60	230/50-230/60	230/50-230/60
Max absorbed current (W)	336	260	260	490	490
<b>INTERNAL EQUIPMENT</b>					
Shelves	4	4	4	8	8
<b>OPTIONAL ACCESSORIES</b>					
Drawer	max 6	max 7	max 7	max 14	max 14
Kit of dividers for drawer	√	√	√	√	√
Additional shelf	√	√	√	√	√
Cloud system	TP-1	TP-1	TP-1	TP-1	TP-1
Castors with frontal brakes	√	√	√	√	√
Temp. chart recorder	√	√	√	√	√
Back-up battery	√	√	√	√	√
GSM module	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3
LAN Port	√	√	√	√	√
Port hole	√	√	√	√	√
Electric Digital key lock	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1
Power supply 115V/60Hz	√	√	√	√	√
CERTIFICATION	CE	CE	CE	CE	CE
<b>DIMENSIONS (WxDxH - MM)/KG</b>					
External Dimensions/weight	700x800x2040-138	700x800x1990-137	700x800x1990-142	1400x800x1990-216	1400x800x1990-226
Packing Dimensions/weight (carton box)	750x850x2180-153	750x850x2180-141	750x850x2150-156	1500x900x2170-236	1500x900x2170-249

specifications

## BLOOD BANK REFRIGERATOR

FROM 64 TO 770 BLOOD BAGS (450 ml/each)

+2°+6°C FROM 100 TO 1400 LT.

### SB-FS-PN-AF MODELS

#### STRUCTURE

External structure in hot-dip galvanized steel, anti-corrosion treated and PVC film coated. Scotch-Brite stainless steel internal structure.

#### INSULATION

60mm insulation obtained by injection of high density ecological polyurethane CFC-free foam for excellent product preservation and energy saving.

#### DOOR

Self-closing glass door (double insulating – low emissivity glass) with folding magnetic gasket (easy to replace) on four sides for perfect closing. Right hand opening or left hand on request. Lock with key.

#### DRAWERS

Scotch-Brite stainless steel drawers with telescopic ball-bearing slides and plexiglas frontal side. Optional plexiglas internal dividers.

#### LIGHT

LED light (energy saving up to 70%, ecological) with automatic switch at door opening. Manual switch on control panel.

#### TEMPERATURE RANGE

Between +2°C and +6°C. Factory preset to +4°C. Digital adjustable with an increment of 0.1°C

#### REFRIGERATION SYSTEM

Completely sealed, silent and highly efficient hermetic compressor and ventilated air condenser (suitable also for tropical countries). Forced-air cooling system conceived to achieve maximum temperature uniformity and stability inside the refrigerator even in case of frequent door openings. Evaporator fan shuts off during door opening. CFC-free refrigerant R452a or CFC/HCFC-free natural refrigerant R290.

#### DEFROSTING

Fully automatic defrosting cycle and auto-evaporation of condensed water.

#### CONTROL PANELS AVAILABLE:

LGK-2 digital control panel (page 10)

TP-1 full touch control panel (page 12)

#### DATA LOGGER

Electronic recording system of temperatures and alarms. Download data on USB pen drive.

#### BACK-UP BATTERY

Self-powered back-up battery supplying electric power to control panel in order to generate alarms in case of power failure.

#### TEMPERATURE CHART RECORDER

Weekly temperature recording system working with 1,5V battery. It is equipped with 52 paper disks and an ink pen.



In accordance with Medical Device Directive for storage and preservation of blood.

#### STANDARD

- Drawers.
- Four one-way wheels with stabilizing adjustable feet.
- Power cord with Schuko type plug or British type plug.
- Protection fuses (on power switch and electronic mainboard).
- RFI filter.
- Password protected power switch and settings.
- Electronic control panel with alarm system.
- Safety thermostat.
- Weekly temperature chart recorder.
- Back-up battery.
- Remote contact (dry, volt-free) for alarm.
- Data Logger with USB port to download data.
- Memory of latest alarms visible on screen.
- Kit for DIN 58371 conformity.

#### OPTIONAL ACCESSORIES

- Kit of dividers for drawer.
- Castors with frontal brakes (+ 10 cm on total height).
- GSM module to send SMS alarm messages to mobile phones (LGK-2).
- LAN port to connect the appliance via ethernet on PC.
- Cloud system (TP-1 full touch).
- Test hole (Ø 25 mm).
- Electric digital key lock (TP-1 full touch).
- Power supply 115V/60Hz.







MODEL	SB10E	FS15E	FS20E	FS25E
<b>TECHNICAL DATA</b>				
Capacity (LT)	100	150	200	250
Blood bags (450 ml/each)	64	96	128	160
Temp. range (°C)	+2 / +6	+2 / +6	+2 / +6	+2 / +6
Cooling type	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling
Defrost	Automatic	Automatic	Automatic	Automatic
CFC-Free Refrigerant gas	R452a or R290	R452a or R290	R452a or R290	R452a or R290
Noise level (db)	<45	<45	<45	<49
<b>CONTROL PANEL</b>				
	LGK-2 TP-1	LGK-2 TP-1	LGK-2 TP-1	LGK-2 TP-1
<b>VISUAL AND AUDIBLE ALARMS</b>				
High/Low temperature	√	√	√	√
Open door	√	√	√	√
Condenser efficiency	√	√	√	√
Damaged sensor	√	√	√	√
Power failure	√	√	√	√
Full recording memory	√	√	√	√
SMS alarm message	optional LGK-2	optional LGK-2	optional LGK-2	optional LGK-2
<b>FUNCTIONS</b>				
Password protected use	√	√	√	√
Remote alarm	√	√	√	√
Data logger	√	√	√	√
Wi-Fi	TP-1	TP-1	TP-1	TP-1
RS232-RS485 serial port	√	√	√	√
Safety thermostat	√	√	√	√
<b>ELECTRICAL DATA</b>				
Supply voltage (V/Hz)	230/50-230/60	230/50-230/60	230/50-230/60	230/50-230/60
Max absorbed current (W)	245	245	245	360
<b>INTERNAL EQUIPMENT</b>				
Drawers	2	3	4	5
Temp. chart recorder	√	√	√	√
Back-up battery	√	√	√	√
<b>OPTIONAL ACCESSORIES</b>				
Kit of dividers for drawer	√	√	√	√
Castors with frontal brakes	√	√	√	√
GSM module	LGK-2	LGK-2	LGK-2	LGK-2
LAN Port	√	√	√	√
Cloud system	TP-1	TP-1	TP-1	TP-1
Port hole	√	√	√	√
Electric Digital key lock	TP-1	TP-1	TP-1	TP-1
Power supply 115V/60Hz	√	√	√	√
<b>DIMENSIONS (WxDXH - MM)/KG</b>				
External Dimensions/weight	600x600x860-68	600x600x1360-89	600x600x1560-107	600x600x1760-125
Packing Dimensions/weight (carton box)	700x700x1030-75	700x700x1570-97	700x700x1770-119	700x700x1890-142



MODEL	FS30E	PN45E	PN52E	AF70E	AF140E
<b>TECHNICAL DATA</b>					
Capacity (LT)	300	450	520	700	1400
Blood bags (450 ml/each)	192	275	330	385	770
Temp. range (°C)	+2 / +6	+2 / +6	+2 / +6	2 / +6	2 / +6
Cooling type	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling
Defrost	Automatic	Automatic	Automatic	Automatic	Automatic
CFC-Free Refrigerant gas	R452a or R290	R452a or R290	R452a or R290	R452a or R290	R452a or R290
Noise level (db)	<49	<49	<49	<49	<50
<b>CONTROL PANEL</b>					
	LGK-2 TP-1	LGK-2 TP-1	LGK-2 TP-1	LGK-2 TP-1	LGK-2 TP-1
<b>VISUAL AND AUDIBLE ALARMS</b>					
High/Low temperature	√	√	√	√	√
Open door	√	√	√	√	√
Condenser efficiency	√	√	√	√	√
Damaged sensor	√	√	√	√	√
Power failure	√	√	√	√	√
Full recording memory	√	√	√	√	√
SMS alarm message	optional LGK-2	optional LGK-2	optional LGK-2	optional LGK-2	optional LGK-2
<b>FUNCTIONS</b>					
Password protected use	√	√	√	√	√
Remote alarm	√	√	√	√	√
Data logger	√	√	√	√	√
Wi-Fi	TP-1	TP-1	TP-1	TP-1	TP-1
RS232-RS485 serial port	√	√	√	√	√
Safety thermostat	√	√	√	√	√
<b>ELECTRICAL DATA</b>					
Supply voltage (V/Hz)	230/50-230/60	230/50-230/60	230/50-230/60	230/50-230/60	230/50-230/60
Max absorbed current (W)	360	336	336	260	490
<b>INTERNAL EQUIPMENT</b>					
Drawers	6	5	6	7	14
Temp. chart recorder	√	√	√	√	√
Back-up battery	√	√	√	√	√
<b>OPTIONAL ACCESSORIES</b>					
Kit of dividers for drawer	√	√	√	√	√
Castors with frontal brakes	√	√	√	√	√
GSM module	LGK-2	LGK-2	LGK-2	LGK-2	LGK-2
LAN Port	√	√	√	√	√
Cloud system	TP-1	TP-1	TP-1	TP-1	TP-1
Port hole	√	√	√	√	√
Electric Digital key lock	TP-1	TP-1	TP-1	TP-1	TP-1
Power supply 115V/60Hz	√	√	√	√	√
<b>DIMENSIONS (WxDXH - MM)/KG</b>					
External Dimensions/weight	600x600x1960-130	700x800x1840-142	700x800x2040-152	700x800x1990-175	1400x800x1990-295
Packing Dimensions/weight (carton box)	700x700x2130-151	750x850x1980-163	750x850x2180-182	750x850x2150-205	1500x900x2170-340

specifications

## FREEZER

### LABORATORY

-25°-30° C FROM 100 TO 1400 LT.

#### SB-CV-AF MODELS

##### STRUCTURE

External structure in hot-dip galvanized steel, anti-corrosion treated and PVC film coated. Scotch-Brite stainless steel internal structure.

##### INSULATION

60mm insulation on SB-AF models and 80 mm insulation on CV models obtained by injection of high density ecological polyurethane CFC-free foam for excellent product preservation and energy saving.

##### DOOR

Self-closing solid door with folding magnetic gasket (easy to replace) on four sides for perfect closing. Right hand opening or left hand on request. Lock with key.

##### SHELVES/DRAWERS

SB-CV models standard equipped with either Scotch-Brite stainless steel shelves, removable and adjustable in height or Scotch-Brite stainless steel drawers with telescopic ball-bearing slides and plexiglas frontal side. AF models standard equipped with Scotch-Brite stainless steel shelves, removable and adjustable in height.

##### TEMPERATURE RANGE

Between -10°C and -25°C. Factory preset to -22°C (SB-AF models).  
Between -10°C and -32°C. Factory preset to -30°C (CV and BL models of AF-SB).  
Digital adjustable temperature with an increment of 0.1°C.

##### REFRIGERATION SYSTEM

Completely sealed, silent and highly efficient hermetic compressor and ventilated air condenser. Static evaporator for SB-CV models. Forced-air cooling system for AF models conceived to achieve maximum temperature uniformity and stability inside the refrigerator even in case of frequent door openings. Evaporator fan shuts off during door opening. CFC-free refrigerant R452a or CFC/HCFC-free natural refrigerant R290.

##### DEFROSTING

Manual defrost on SB-CV models. Fully automatic defrosting cycle and auto-evaporation of condensed water on AF models

##### CONTROL PANELS AVAILABLE:

LGK-2 digital control panel (page 10)

LGK-3 touch control panel (page 11)

TP-1 full touch control panel (page 12)

##### DATA LOGGER

Electronic recording system of temperatures and alarms. Download of data on USB pen drive.



#### STANDARD

- Shelves or drawers (SB-CV models). Shelves on AF models.
- Four one-way wheels with stabilizing adjustable feet.
- Power cord with Schuko type plug or British type plug.
- Protection fuses (on power switch and electronic mainboard).
- RFI filter.
- Password protected power switch and settings.
- Electronic control panel with alarm system.
- Remote contact (dry, volt-free) for alarm.
- Data Logger with USB port.
- Memory of latest alarms visible on screen.
- Power failure alarm at electricity recovery.

#### OPTIONAL ACCESSORIES

- Scotch-Brite stainless steel sliding drawers with telescopic ball-bearing slides and plexiglas frontal side (AF models).
- Kit of dividers for drawer.
- Additional shelf.
- Castors with frontal brakes (+ 10 cm on total height).
- Weekly temperature chart recorder.
- Back-up battery.
- GSM module to send SMS alarm messages to mobile phones (LGK-2/LGK-3).
- LAN port to connect the appliance via ethernet on PC.
- Cloud system (TP-1 full touch).
- Test hole (Ø 25 mm).
- Electric digital key lock (LGK-3/TP-1 full touch).
- Power supply 115V/60Hz.
- Insulation of 80 mm for AF models.





MODEL	SB10B	SB10BL	CV3	CV4	CV5
<b>TECHNICAL DATA</b>					
Capacity (LT)	100	100	160	220	250
Factory set (°C)	-22	-30	-30	-30	-30
Temp. range (°C)	-10 / -25	-10 / -32	-10 / -32	-10 / -32	-10 / -32
Cooling type	Static evaporator	Static evaporator	Static evaporator	Static evaporator	Static evaporator
Defrost	Manual	Manual	Manual	Manual	Manual
CFC-Free Refrigerant gas	R452a or R290	R452a or R290	R452a or R290	R452a or R290	R452a or R290
Noise level (db)	<45	<45	<45	<45	<45
<b>CONTROL PANEL</b>					
	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1
<b>VISUAL AND AUDIBLE ALARMS</b>					
High/Low temperature	√	√	√	√	√
Open door	√	√	√	√	√
Condenser efficiency	√	√	√	√	√
Damaged sensor	√	√	√	√	√
Power failure	optional	optional	optional	optional	optional
Full recording memory	√	√	√	√	√
SMS alarm message	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3
<b>FUNCTIONS</b>					
Password protected use	√	√	√	√	√
Remote alarm	√	√	√	√	√
Data logger	√	√	√	√	√
Wi-Fi	TP-1	TP-1	TP-1	TP-1	TP-1
RS232-RS485 serial port	√	√	√	√	√
4-20 mA converter module	LGK-3	LGK-3	LGK-3	LGK-3	LGK-3
<b>ELECTRICAL DATA</b>					
Supply voltage (V/Hz)	230/50-230/60	230/50-230/60	230/50-230/60	230/50-230/60	230/50-230/60
Max absorbed current (W)	345	345	450	450	450
<b>INTERNAL EQUIPMENT</b>					
Drawers	2	2	3	4	5
Shelves in alternative	2	2	3	4	5
<b>OPTIONAL ACCESSORIES</b>					
Kit of dividers for drawer	√	√	√	√	√
Castors with frontal brakes	√	√	√	√	√
Temp. chart recorder	√	√	√	√	√
Back-up battery	√	√	√	√	√
GSM module	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3
LAN Port	√	√	√	√	√
Cloud system	TP-1	TP-1	TP-1	TP-1	TP-1
Port hole	√	√	√	√	√
Electric Digital key lock	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1
Power supply 115V/60Hz	√	√	√	√	√
<b>CERTIFICATION</b>					
	CE	CE	CE	CE	CE
<b>DIMENSIONS (WXDXH - MM)/KG</b>					
External Dimensions/weight	600x600x860-66	600x600x860-66	640x620x1400-95	640x620x1600-111	640x620x1800-125
Packing Dimensions/weight (carton box)	700x700x1030-73	700x700x1030-73	700x700x1530-105	700x700x1780-121	700x700x1930-135



MODEL	CV6	AF70B	AF70BL	AF140B	AF140BL
<b>TECHNICAL DATA</b>					
Capacity (LT)	320	700	700	1400	1400
Factory set (°C)	-30	-22	-30	-22	-30
Temp. range (°C)	-10 / -32	-10 / -25	-10 / -32	-10 / -25	-10 / -32
Cooling type	Static evaporator	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling
Defrost	Manual	Automatic	Automatic	Automatic	Automatic
CFC-Free Refrigerant gas	R452a or R290	R452a or R290	RR452a or R290	R452a or R290	R452a or R290
Noise level (db)	<45	<50	<50	<60	<60
<b>CONTROL PANEL</b>					
	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1
<b>VISUAL AND AUDIBLE ALARMS</b>					
High/Low temperature	√	√	√	√	√
Open door	√	√	√	√	√
Condenser efficiency	√	√	√	√	√
Damaged sensor	√	√	√	√	√
Power failure	optional	optional	optional	optional	optional
Full recording memory	√	√	√	√	√
SMS alarm message	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3
<b>FUNCTIONS</b>					
Password protected use	√	√	√	√	√
Remote alarm	√	√	√	√	√
Data logger	√	√	√	√	√
Wi-Fi	TP-1	TP-1	TP-1	TP-1	TP-1
RS232-RS485 serial port	√	√	√	√	√
4-20 mA converter module	LGK-3	LGK-3	LGK-3	LGK-3	LGK-3
<b>ELECTRICAL DATA</b>					
Supply voltage (V/Hz)	230/50-230/60	230/50-230/60	230/50-230/60	230/50-230/60	230/50-230/60
Max absorbed current (W)	450	530	887	614	1084
<b>INTERNAL EQUIPMENT</b>					
Drawers	6	optional - max 7	optional - max 7	optional - max 14	optional - max 14
Shelves	6	4	4	8	8
<b>OPTIONAL ACCESSORIES</b>					
Kit of dividers for drawer	√	√	√	√	√
Castors with frontal brakes	√	√	√	√	√
Temp. chart recorder	√	√	√	√	√
Back-up battery	√	√	√	√	√
GSM module	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3
LAN Port	√	√	√	√	√
Cloud system	TP-1	TP-1	TP-1	TP-1	TP-1
Port hole	√	√	√	√	√
Electric Digital key lock	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1
Power supply 115V/60Hz	√	√	√	√	√
<b>CERTIFICATION</b>					
	CE	CE	CE	CE	CE
<b>DIMENSIONS (WXDXH - MM)/KG</b>					
External Dimensions/weight	640x620x2000-136	700x800x1990-150	700x800x1990-150	1400x800x1990-229	1400x800x1990-229
Packing Dimensions/weight (carton box)	700x700x2130-146	750x850x2150-162	750x850x2150-162	1500x900x2170-249	1500x900x2170-249

specifications



## DEEP FREEZER

### LABORATORY

-40° C FROM 300 TO 600 LT.

#### CL MODELS

##### STRUCTURE

External structure in hot-dip galvanized steel, anti-corrosion treated and PVC film coated. Scotch-Brite stainless steel internal structure.

##### INSULATION

100mm insulation obtained by injection of high density ecological polyurethane CFC-free foam for excellent product preservation and energy saving.

##### DOOR

Self-closing solid door with two folding magnetic gaskets (easy to replace) on four sides for perfect closing. Right hand opening or left hand on request. Optional electric digital key lock.

##### SHELVES/DRAWERS

Standard equipped with either Scotch-Brite stainless steel shelves, removable and adjustable in height or Scotch-Brite stainless steel drawers with telescopic ball-bearing slides and plexiglas frontal side.

##### TEMPERATURE RANGE

Between -15°C and -42°C. Factory preset to -40°C. Digital adjustable temperature with an increment of 0.1°C.

##### REFRIGERATION SYSTEM

Completely sealed, silent and highly efficient hermetic compressor and ventilated air condenser. Static evaporator. CFC-free refrigerant R452a or CFC/HCFC-free natural refrigerant R290.

##### DEFROSTING

Manual defrosting cycle.

##### CONTROL PANELS AVAILABLE:

LGK-2 digital control panel (page 10)  
 LGK-3 touch control panel (page 11)  
 TP-1 full touch control panel (page 12)

##### DATA LOGGER

Electronic recording system of temperatures and alarms. Download of data on USB pen drive.



#### STANDARD

- Shelves or drawers.
- Four one-way wheels with stabilizing adjustable feet.
- Power cord with Schuko type plug or British type plug.
- Protection fuses.  
(on power switch and electronic mainboard)
- RFI filter.
- Password protected power switch and settings.
- Electronic control panel with alarm system.
- Remote contact (dry, volt-free) for alarm.
- Data Logger with USB port to download data.
- Memory of latest alarms visible on screen.
- Power failure alarm at electricity recovery.

#### OPTIONAL ACCESSORIES

- Kit of dividers for drawer.
- Additional shelf.
- Castors with frontal brakes (+ 10 cm on total height).
- Weekly temperature chart recorder.
- Back-up battery.
- GSM module to send SMS alarm messages to mobile phones (LGK-2/LGK-3).
- LAN port to connect the appliance via ethernet on PC.
- Cloud system (TP-1 full touch).
- Test hole (Ø 25 mm).
- Electric digital key lock (LGK-3/TP-1 full touch).
- Power supply 115V/60Hz.



## PLASMA FREEZER

-40°C 600 LT.

### CL60B/PF MODEL

#### STRUCTURE

External structure in hot-dip galvanized steel, anti-corrosion treated and PVC film coated. Scotch-Brite stainless steel internal structure.

#### INSULATION

100mm insulation obtained by injection of high density ecological polyurethane CFC-free foam for excellent product preservation and energy saving.

#### DOOR

Self-closing solid door with two folding magnetic gaskets (easy to replace) on four sides for perfect closing. Right hand opening or left hand on request. Optional electric digital key lock.

#### DRAWERS

Standard equipped with 6 Scotch-Brite stainless steel drawers with telescopic ball-bearing slides and plexiglas frontal side. Optional kit of Plexiglas dividers for drawer.

#### TEMPERATURE RANGE

Between -15°C and -42°C. Factory preset to -40°C. Digital adjustable temperature with an increment of 0.1°C.

#### REFRIGERATION SYSTEM

Completely sealed, silent and highly efficient hermetic compressor and ventilated air condenser. Static evaporator. CFC-free refrigerant R452a or CFC/HCFC-free natural refrigerant R290.

#### DEFROSTING

Manual defrosting cycle.

#### CONTROL PANELS AVAILABLE:

LGK-2 digital control panel (page 10)

TP-1 full touch control panel (page 12)

#### DATA LOGGER

Electronic recording system of temperatures and alarms of last 30 days.

Download of data on USB pen drive.

#### BACK-UP BATTERY

Self-powered back-up battery supplying electric power to control panel in order to generate alarms in case of power failure.

#### TEMPERATURE CHART RECORDER

Weekly temperature recording system working with 1,5V battery. It is equipped with 52 paper disks and an ink pen.



In accordance with Medical Device Directive for storage and preservation of plasma.

#### STANDARD

- Drawers.
- Four one-way wheels with stabilizing adjustable feet.
- Power cord with Schüko type plug or British type plug.
- Protection fuses.  
(on power switch and electronic mainboard)
- RFI filter.
- Password protected power switch and settings.
- Electronic control panel with alarm system.
- Weekly temperature chart recorder.
- Back-up battery.
- Remote contact (dry, volt-free) for alarm.
- Data Logger with USB port to download data.
- Memory of latest alarms visible on screen.
- Kit for DIN 58375 conformity.

#### OPTIONAL ACCESSORIES

- Kit of dividers for drawer.
- Castors with frontal brakes (+ 10 cm on total height).
- GSM module to send SMS alarm messages to mobile phones (LGK-2).
- LAN port to connect the appliance via ethernet on PC.
- Cloud system (TP-1 full touch).
- Test hole (Ø 25 mm).
- Electric digital key lock (TP-1 full touch).
- Power supply 115V/60Hz.





MODEL	CL30B	CL60B	CL60B/2
<b>TECHNICAL DATA</b>			
Capacity (LT)	300	600	300/300
Factory set	-40	-40	-40 / -40
Temp. range (°C)	-15 / -42	-15 / -42	-15 / -42
Cooling type	Static evaporator	Static evaporator	Static evaporator
Defrost	Manual	Manual	Manual
CFC-Free Refrigerant gas	R452a or R290	R452a or R290	R452a or R290
Noise level (db)	<52	<52	<52
<b>CONTROL PANEL</b>			
	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1
<b>VISUAL AND AUDIBLE ALARMS</b>			
High/Low temperature	√	√	√
Open door	√	√	√
Condenser efficiency	√	√	√
Damaged sensor	√	√	√
Power failure	optional	optional	optional
Full recording memory	√	√	√
SMS alarm message	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3
<b>FUNCTIONS</b>			
Password protected use	√	√	√
Remote alarm	√	√	√
Data logger	√	√	√
Wi-Fi	TP-1	TP-1	TP-1
RS232-RS485 serial port	√	√	√
4-20 mA converter module	LGK-3	LGK-3	LGK-3
<b>ELECTRICAL DATA</b>			
Supply voltage (V/Hz)	230/50-230/60	230/50-230/60	230/50-230/60
Max absorbed current (W)	520	580	760
<b>INTERNAL EQUIPMENT</b>			
Drawers in alternative Shelves	6 6	6 6	3/3 3/3
Temp.chart recorder	optional	optional	optional
Back-up battery	optional	optional	optional
<b>OPTIONAL ACCESSORIES</b>			
Kit of dividers for drawer	√	√	√
Castors with frontal brakes	√	√	√
Temp.chart recorder	√	√	√
Back-up battery	√	√	√
GSM module	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3
LAN Port	√	√	√
Cloud system	TP-1	TP-1	TP-1
Port hole	√	√	√
Electric Digital key lock	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1
Power supply 115V/60Hz	√	√	√
<b>CERTIFICATION</b>			
	CE	CE	CE
<b>DIMENSIONS (WxDxH - MM)/KG</b>			
External Dimensions/weight	680x660x2040-145	780x840x1930-204	780x840x1930-224
Packing Dimensions/weight (carton box)	750x850x2130-160	860x900x2080-216	860x900x2080-240



MODEL	CL60B/PF
<b>TECHNICAL DATA</b>	
Capacity (LT)	600
Factory set	-40
Temp. range (°C)	-15 / -42
Cooling type	Static evaporator
Defrost	Manual
CFC-Free Refrigerant gas	R452a or R290
Noise level (db)	<52
<b>CONTROL PANEL</b>	
	LGK-2 TP-1
<b>VISUAL AND AUDIBLE ALARMS</b>	
High/Low temperature	√
Open door	√
Condenser efficiency	√
Damaged sensor	√
Power failure	√
Full recording memory	√
SMS alarm message	optional LGK-2 LGK-3
<b>FUNCTIONS</b>	
Password protected use	√
Remote alarm	√
Data logger	√
Wi-Fi	TP-1
RS232-RS485 serial port	√
4-20 mA converter module	-
<b>ELECTRICAL DATA</b>	
Supply voltage (V/Hz)	230/50-230/60
Max absorbed current (W)	580
<b>INTERNAL EQUIPMENT</b>	
Drawers in alternative Shelves	6 6
Temp.chart recorder	√
Back-up battery	√
<b>OPTIONAL ACCESSORIES</b>	
Kit of dividers for drawer	√
Castors with frontal brakes	√
Temp.chart recorder	standard
Back-up battery	standard
GSM module	LGK-2
LAN Port	√
Cloud system	TP-1
Port hole	√
Electric Digital key lock	TP-1
Power supply 115V/60Hz	√
<b>CERTIFICATION</b>	
<b>DIMENSIONS (WxDxH - MM)/KG</b>	
External Dimensions/weight	780x840x1930-204
Packing Dimensions/weight (carton box)	860x900x2080-216

specifications



## COMBINED REFRIGERATOR AND FREEZER

### LABORATORY AND PHARMACY

+2°+12°/-10°-30°C FROM 200/100 TO 700/700 LT.

#### FC/2-AF/2 MODELS

##### STRUCTURE

External structure in hot-dip galvanized steel, anti-corrosion treated and PVC film coated. Scotch-Brite stainless steel internal structure.

##### INSULATION

60mm insulation obtained by injection of high density ecological polyurethane CFC-free foam for excellent product preservation and energy saving.

##### DOOR

Self-closing solid or glass door (double insulating – low emissivity glass) for refrigerator compartment and self-closing solid door for freezer compartment. Folding magnetic gasket (easy to replace) on four sides for perfect closing. Right hand opening or left hand on request. Lock with key.

##### SHELVES/DRAWERS

Scotch-Brite stainless steel shelves, removable and adjustable in height in refrigerator compartment. Scotch-Brite stainless steel drawers with telescopic ball-bearing slides and plexiglas frontal side in freezer compartment (shelves on AF/2 models).

##### LIGHT

LED light (energy saving up to 70%, ecological) with automatic switch at door opening in refrigerator compartment. Manual switch on control panel.

##### TEMPERATURE RANGE

Refrigerator compartment: between +2°C and +12°C. Factory preset to +4°C.  
Freezer compartment: between -10°C and -30°C. (-25°C on AF140/2 models)  
Factory preset to -25°C (-22°C on AF140/2 models).  
Digital adjustable temperatures with an increment of 0.1°C.

##### DUAL REFRIGERATION SYSTEM

Two separate completely sealed, silent and highly efficient hermetic compressors and ventilated air condensers (suitable also for tropical countries). Forced-air cooling system in refrigerator compartment conceived to achieve maximum temperature uniformity and stability inside the refrigerator even in case of frequent door openings. Evaporator fan shuts off during door openings. Static evaporator in freezer compartment. Ventilated evaporator for both compartments of model AF140/2. CFC-free refrigerant R452a or CFC/HCFC-free natural refrigerant R290.

##### DEFROSTING

Fully automatic defrosting cycle in refrigerator compartment.  
Manual defrost in freezer compartment. Hot gas defrost in freezer compartment of AF140/2 models.

##### CONTROL PANELS AVAILABLE:

LGK-2 digital control panel (page 10)  
LGK-3 touch control panel (page 11)  
TP-1 full touch control panel (page 12)

##### DATA LOGGER

Electronic recording system of temperatures and alarms in refrigerator and freezer compartments. Download data on USB pen drive.



#### STANDARD

- Shelves in refrigerator compartment.
- Drawers in freezer compartment (shelves on AF/2 models).
- Four one-way wheels with stabilizing adjustable feet.
- Two power cords with Schuko type plug or British type plug.
- Protection fuses.  
(on power switch and electronic mainboard)
- RFI filter.
- Password protected power switch and settings.
- Electronic control panel with alarm system.
- Remote contacts (dry, volt-free) for alarm
- Two data loggers with USB port to download data.
- Memory of latest alarms visible on screen.
- Power failure alarm at electricity recovery.

#### OPTIONAL ACCESSORIES

- Scotch-Brite stainless steel sliding drawers (see table).
- Kit of dividers for drawer.
- Additional shelf.
- Castors with frontal brakes (+ 10 cm on total height).
- Weekly temperature chart recorder.
- Back-up battery.
- GSM module to send SMS alarm messages to mobile phones (LGK-2/LGK-3).
- LAN port to connect the appliance via ethernet on PC.
- Cloud system (TP-1 full touch).
- Safety thermostat on refrigerator compartment.
- Test hole (Ø 25 mm).
- Electric digital key lock (LGK-3/TP-1 full touch).
- Power supply 115V/60Hz





MODEL	FC39/2	FC39V/2
<b>TECHNICAL DATA</b>		
Capacity Refrigerator (LT)	200	200
Capacity Freezer (LT)	100	100
Factory set (°C)	+4 / -25	+4 / -25
Temp. range (°C)	+2 / +12 -10 / -30	+2 / +12 -10 / -30
Cooling type Refrigerator	Forced air cooling	Forced air cooling
Cooling type Freezer	Static evaporator	Static evaporator
Defrost	Refrigerator Automatic Freezer Manual	Refrigerator Automatic Freezer Manual
CFC-Free Refrigerant gas	R452a or R290	R452a or R290
Noise level (db)	<50	<50
<b>CONTROL PANEL</b>		
	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1
<b>VISUAL AND AUDIBLE ALARMS</b>		
High/Low temperature	√	√
Open door	√	√
Condenser efficiency	√	√
Damaged sensor	√	√
Power failure	optional	optional
Full recording memory	√	√
SMS alarm message	optional LGK-2 LGK-3	optional LGK-2 LGK-3
<b>FUNCTIONS</b>		
Password protected use	√	√
Remote alarm	√	√
Data logger	√	√
Wi-Fi	TP-1	TP-1
RS232-RS485 serial port	√	√
4-20 mA converter module	LGK-3	LGK-3
Safety thermostat	optional	optional
<b>ELECTRICAL DATA</b>		
Supply voltage (V/Hz)	230/50-230/60	230/50-230/60
Max absorbed current (W)	427	427
<b>INTERNAL EQUIPMENT</b>		
Refrigerator compartment	3 shelves	3 shelves
Freezers compartment	2 drawers	2 drawers
<b>OPTIONAL ACCESSORIES</b>		
Drawer in refrig. compartment	max 3	max 3
Kit of dividers for drawer	√	√
Castors with frontal brakes	√	√
Temp. chart recorder	√	√
Back-up battery	√	√
GSM module	LGK-2 LGK-3	LGK-2 LGK-3
LAN Port	√	√
Cloud system	TP-1	TP-1
Port hole	√	√
Electric Digital key lock	LGK-3 TP-1	LGK-3 TP-1
Power supply 115V/60Hz	√	√
<b>CERTIFICATION</b>		
	CE	CE
<b>DIMENSIONS (WxDxH - MM)/KG</b>		
External Dimensions/weight	600x670x1970-127	600x670x1970-131
Packing Dimensions/weight (carton box)	720x720x2200-137	720x720x2200-141



MODEL	AF70/2	AF70V/2	AF140/2	AF140V/2
<b>TECHNICAL DATA</b>				
Capacity Refrigerator (LT)	350	350	700	700
Capacity Freezer (LT)	350	350	700	700
Factory set (°C)	+4 / -25	+4 / -25	+4 / -22	+4 / -22
Temp. range (°C)	+2 / +12 -10 / -30	+2 / +12 -10 / -30	+2 / +12 -10 / -25	+2 / +12 -10 / -25
Cooling type Refrigerator	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling
Cooling type Freezer	Static evaporator	Static evaporator	Forced air cooling	Forced air cooling
Defrost	Refrigerator Automatic Freezer Manual	Refrigerator Automatic Freezer Manual	Refrigerator Automatic Freezer Automatic	Refrigerator Automatic Freezer Automatic
CFC-Free Refrigerant gas	R452a or R290	R452a or R290	R452a or R290	R452a or R290
Noise level (db)	<50	<50	<52	<52
<b>CONTROL PANEL</b>				
	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1
<b>VISUAL AND AUDIBLE ALARMS</b>				
High/Low temperature	√	√	√	√
Open door	√	√	√	√
Condenser efficiency	√	√	√	√
Damaged sensor	√	√	√	√
Power failure	optional	optional	optional	optional
Full recording memory	√	√	√	√
SMS alarm message	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3
<b>FUNCTIONS</b>				
Password protected use	√	√	√	√
Remote alarm	√	√	√	√
Data logger	√	√	√	√
Wi-Fi	TP-1	TP-1	TP-1	TP-1
RS232-RS485 serial port	√	√	√	√
4-20 mA converter module	LGK-3	LGK-3	LGK-3	LGK-3
Safety thermostat	optional	optional	optional	optional
<b>ELECTRICAL DATA</b>				
Supply voltage (V/Hz)	230/50-230/60	230/50-230/60	230/50-230/60	230/50-230/60
Max absorbed current (W)	350/480	350/480	1100	1100
<b>INTERNAL EQUIPMENT</b>				
Refrigerator compartment	2 shelves	2 shelves	4 shelves	4 shelves
Freezers compartment	3 drawers	3 drawers	4 shelves	4 shelves
<b>OPTIONAL ACCESSORIES</b>				
Drawer in refrig. compartment	max 3	max 3	max 7+max7 in freezer	max 7+max7 in freezer
Kit of dividers for drawer	√	√	√	√
Castors with frontal brakes	√	√	√	√
Temp. chart recorder	√	√	√	√
Back-up battery	√	√	√	√
GSM module	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3
LAN Port	√	√	√	√
Cloud system	TP-1	TP-1	TP-1	TP-1
Port hole	√	√	√	√
Electric Digital key lock	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1
Power supply 115V/60Hz	√	√	√	√
<b>CERTIFICATION</b>				
	CE	CE	CE	CE
<b>DIMENSIONS (WxDxH - MM)/KG</b>				
External Dimensions/weight	700x870x2040-180	700x870x2040-183	1400x800x1990-240	1400x800x1990-265
Packing Dimensions/weight (carton box)	760x860x2180-193	760x860x2180-198	1500x900x2170-258	1500x900x2170-280

specifications

## COMBINED REFRIGERATOR

### PHARMACY

+2°/+15°/+2°/+15°C FROM 150/150 TO 700/700 LT.

#### FP/2 MODELS

##### STRUCTURE

External structure in hot-dip galvanized steel, anti-corrosion treated and PVC film coated. Scotch-Brite stainless steel internal structure.

##### INSULATION

60mm insulation obtained by injection of high density ecological polyurethane CFC-free foam for excellent product preservation and energy saving.

##### DOOR

Two self-closing glass doors (double insulating – low emissivity glass) for both refrigerator compartments. Folding magnetic gasket (easy to replace) on four sides for perfect closing. Right hand opening or left hand on request. Lock with key.

##### SHELVES

Scotch-Brite stainless steel shelves, removable and adjustable in height in both compartments.

##### LIGHT

LED light (energy saving up to 70%, ecological) with automatic switch at door opening in both compartments. Manual switch on control panel.

##### TEMPERATURE RANGE

Upper compartment: between +2°C and +15°C. Factory preset to +4°C.  
Lower compartment: between +2°C and +15°C. Factory preset to +4°C.  
Digital adjustable temperatures with an increment of 0.1°C.

##### DUAL REFRIGERATION SYSTEM

Two separate completely sealed, silent and highly efficient hermetic compressors and ventilated air condensers (suitable also for tropical countries). Forced-air cooling system in both compartments conceived to achieve maximum temperature uniformity and stability inside the refrigerator even in case of frequent door openings. Evaporator fan shuts off during door openings. CFC-free refrigerant R452a or CFC/HCFC-free natural refrigerant R290.

##### DEFROSTING

Fully automatic defrosting cycle in both compartments.

##### CONTROL PANELS AVAILABLE:

LGK-2 digital control panel (page 10)  
LGK-3 touch control panel (page 11)  
TP-1 full touch control panel (page 12)

##### DATA LOGGER

Electronic recording system of temperatures and alarms in both compartments. Download data on USB pen drive.



#### STANDARD

- Shelves.
- Four one-way wheels with stabilizing adjustable feet.
- Two power cords with Schüko type plug or British type plug.
- Protection fuses.  
(on power switch and electronic mainboard)
- RFI filter.
- Password protected power switch and settings.
- Two microprocessors to monitor temperatures.
- Remote contacts (dry, volt-free) for alarm.
- Two data loggers with USB port to download data.
- Memory of latest alarms visible on screen.
- Power failure alarm at electricity recovery.



#### OPTIONAL ACCESSORIES

- Scotch-Brite stainless steel sliding drawers (see table).
- Kit of dividers for drawer.
- Scotch-Brite stainless steel pharmacy drawers (h 7 cm).
- Additional shelf.
- Castors with frontal brakes (+ 10 cm on total height).
- Weekly temperature chart recorder.
- Back-up battery.
- GSM module to send SMS alarm messages to mobile phones (LGK-2/LGK-3).
- LAN port to connect the appliance via ethernet on PC.
- Cloud system (TP-1 full touch).
- Safety thermostat.
- Test hole (Ø 25 mm).
- Kit for DIN 13277 conformity (former DIN 58345).
- Electric digital key lock (LGK-3/TP-1 full touch).
- Power supply 115V/60Hz





MODEL	FP30V/2	FP70V/2	FP60V/2	FP140V/2
<b>TECHNICAL DATA</b>				
Capacity (LT) Upper comp.	150	350	300	700
Capacity (LT) Lower comp.	150	350	300	700
Factory set	+4 / +4	+4 / +4	+4 / +4	+4 / +4
Temp. range (°C)	+2 / +15 +2 / +15	+2 / +15 +2 / +15	+2 / +15 +2 / +15	+2 / +15 +2 / +15
Cooling type	Forced air cooling	Forced air cooling	Forced air cooling	Forced air cooling
Defrost	Automatic	Automatic	Automatic	Automatic
CFC-Free Refrigerant gas	R452a or R290	R452a or R290	R452a or R290	R452a or R290
Noise level (db)	<50	<50	<52	<52
<b>CONTROL PANE</b>				
	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1	LGK-2 LGK-3 TP-1
<b>VISUAL AND AUDIBLE ALARMS</b>				
High/Low temperature	√	√	√	√
Open door	√	√	√	√
Condenser efficiency	√	√	√	√
Damaged sensor	√	√	√	√
Power failure	optional	optional	optional	optional
Full recording memory	√	√	√	√
SMS alarm message	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3	optional LGK-2 LGK-3
<b>FUNCTIONS</b>				
Password protected use	√	√	√	√
Remote alarm	√	√	√	√
Data logger	√	√	√	√
Wi-Fi	TP-1	TP-1	TP-1	TP-1
RS232-RS485 serial port	√	√	√	√
4-20 mA converter module	LGK-3	LGK-3	LGK-3	LGK-3
Safety thermostat	optional	optional	optional	optional
<b>ELECTRICAL DATA</b>				
Supply voltage (V/Hz)	230/50-230/60	230/50-230/60	230/50-230/60	230/50-230/60
Max absorbed current (W)	245/245	260/260	360/360	260/260
<b>INTERNAL EQUIPMENT</b>				
Upper compartment	3 shelves	3 shelves	4 shelves	4 shelves
Lower compartment	3 shelves	3 shelves	4 shelves	4 shelves
<b>OPTIONAL ACCESSORIES</b>				
Drawer	max 3/3	max 3/3	max 6/6	max 7/7
Kit of dividers for drawer	√	√	√	√
Pharma drawer (h 7 cm)	max 5/5	max 5/5	max 10/10	max 12/12
Cloud system	TP-1	TP-1	TP-1	TP-1
Castors with frontal brakes	√	√	√	√
Temp. chart recorder	√	√	√	√
Back-up battery	√	√	√	√
GSM module	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3	LGK-2 LGK-3
LAN Port	√	√	√	√
Port hole	√	√	√	√
Electric Digital key lock	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1	LGK-3 TP-1
Power supply 115V/60Hz	√	√	√	√
<b>CERTIFICATION</b>				
	CE	CE	CE	CE
<b>DIMENSIONS (WxDxH - MM)/KG</b>				
External Dimensions/weight	600x670x1960-125	700x870x2040-183	1200x600x1960-198	1400x800x1990-265
Packing Dimensions/weight (carton box)	720x720x2200-139	760x860x2180-198	1500x900x2170-249	1600x960x2210-394

