



FREEZER



-25°C FREEZER UPRIGHT LUF-25-100 SERIES

Labocon -25°C Upright Freezer LUF-25-100 Series offers reliability essential for the protection of sensitive lab samples in the range of -10°C to -25°C. Our freezers combine superior performance with cost-effective operation and innovative features.

Features

- ▶ ABS liner interior and painted steel board exterior
- ▶ Door with safety lock and rotatable sure-grip door handle
- ▶ Insulation thickness: 90 mm
- ▶ Polycarbonate insulated inner doors
- ▶ LCD display
- ▶ Microprocessor temperature controller
- ▶ Password protected configuration page
- ▶ Refrigerant: CFC free R507
- ▶ Danfoss compressor and EBM fan motor
- ▶ 4 units Caster for easy handling
- ▶ 7 units drawers made of plastic inside
- ▶ Safety functions: High or low temperature alarm, system failure alarm
- ▶ Optional: Chart Recorder

Application

Labocon -25°C Upright Freezer LUF-25-100 Series are suitable for storage of number of samples like plasma and test samples to biologicals, storage of life-saving and frozen blood supplies and vaccines, enzymes for genetic research, temperature sensitive materials, reagents and other media.

Specification

Model		LUF-25-101
Capacity (L)		270 L
Temp. range		-10°C to -25°C
Dimension (W x D x H) (mm)	Overall	700x600x1750
	Internal	440x400x1490
Power		370 W
Power Supply		220V /50Hz
Weight (Net/Gross)		65/70 kg
Catalog no.		9428181343



LUF-25-101

-25°C FREEZER UPRIGHT LUF-25-200 SERIES

Labocon -25°C Upright Freezer LUF-25-200 Series offers reliability essential for the protection of sensitive lab samples between -16°C / -24°C. Our freezers combine superior performance with cost-effective operation and innovative features.

Features

- ▶ Sheet steel epoxy coated white colour (rust-proof material) outside and atoxic plastic material inside
- ▶ Internal corners are rounded to make easy any cleaning operation
- ▶ High density (40 Kg/m³) polyurethane insulation
- ▶ Insulation thickness: 80 mm
- ▶ Door with removable magnetic rubber gasket and external handle with lever mechanism
- ▶ 8 storage baskets supported by evaporant shelves that facilitate optimal cooling of the basket itself
- ▶ 2 feet adjustable in height for levelling and 2 casters mounted in the back side for easy handling
- ▶ Defrosting: Auto defrosting
- ▶ Refrigerant: CFC- and HCFC-free
- ▶ Control panel with temperature control display and switches, super freezing switch and alarm features
- ▶ LED Display and setting buttons
- ▶ Plug : Schuko type
- ▶ Cooling unit mounted at the bottom with a condensing unit compounded by a hermetic compressor and an air cooled condenser fixed in the cabinet rear and into the storage chamber evaporant shelves
- ▶ Safety functions:
 - ▶ Alarm: visual alarm (with a flashing LED) for high temperature and acoustic (through a buzzer, with muting facilities) for high temperature and door open. The alarm works only in case of presence of electricity.
 - ▶ Super freezing switch: freeze new material in the shortest possible time, till 18 Kg within 24 hours
 - ▶ Optional: Safety door lock with key, temperature chart recorder



Application

Labocon -25°C Upright Freezer LUF-25-200 Series are suitable for storage of number of samples like plasma and test samples to biologicals, storage of life-saving and frozen blood supplies and vaccines, enzymes for genetic research, temperature sensitive materials, reagents and other media.

Specification

Model	LUF-25-201	LUF-25-202	LUF-25-203
Capacity (L)	70 L	100 L	115 L
Temp. range	adjustable between -16°C / -24°C		
Overall Dimension (W x D x H) (mm)	550x630x630	550x630x850	550x620x850
Weight (kg)	40/50 kg	50/60 kg	60/80 kg
Power supply	220V/50Hz		
Catalog no.	9428183181	9428184181	9428185181

Model	LUF-25-204	LUF-25-205	LUF-25-206
Capacity (L)	175 L	220 L	270 L
Temp. range	adjustable between -16°C / -24°C		
Overall Dimension (W x D x H) (mm)	600x630x1400	600x630x1600	600x630x1840
Weight (kg)	65/75 kg	75/90 kg	90/110 kg
Power supply	220V/50Hz		
Catalog no.	9428186181	9428187181	9428188181

-25°C FREEZER UPRIGHT LUF-25-300 SERIES

Labocon -25°C Upright Freezer LUF-25-300 Series offers reliability essential for the protection of sensitive lab samples infinitely adjustable between -5°C / -25°C. Our freezers combine superior performance with cost-effective operation and innovative features.

Features

- ▶ Sheet steel epoxy coated white colour (rust-proof material) outside and atoxic plastic material inside
- ▶ Internal corners are rounded to make easy any cleaning operation
- ▶ High density (40 Kg/m³) polyurethane insulation
- ▶ Insulation thickness: 50 mm
- ▶ Hinged door made of perimetrical aluminium frame, white colour and three layers of heated tempered insulating glass, with vacuum among the glass layers and heating film. It is provided with removable magnetic rubber gasket and flush-fitting type door handle. The door is also fitted with a spring loaded automatic closing device for openings inferior then 90°
- ▶ 3 easily adjustable open wire shelves made of sheet steel with a strong plastic coating
- ▶ 2 feet adjustable in height for levelling and 2 casters mounted in the back side for easy handling
- ▶ Internal lighting : 1 neon tube located in the ceiling of the storage chamber with automatic activation through a special switch located on the control panel
- ▶ Control panel with main switch, lighting switch and digital electronic thermostat with incorporated alarm
- ▶ LED display with red colour, bright indication and an accuracy of 0.1°C
- ▶ Refrigeration: forced-air circulation
- ▶ Refrigerant : R404a CFC-free
- ▶ Defrosting: completely automatic, thermostat controlled. The condensate water is automatically channeled into an heated tray, located in the motor compartment, for the automatic evaporation of the condensate water
- ▶ LED Display and setting buttons
- ▶ Plug : Schuko type
- ▶ Breakers : 2 glass cartridge fuses with a rating of 10A, at protection of the appliance



LUF-25-301

- ▶ Cooling unit mounted at the bottom with a condensing unit compounded by a hermetic compressor and a wire condenser, air cooled through a fan
- ▶ Noise level (dB(A)) : ≤ 52
- ▶ Safety functions: over or below temperature alarm, both acoustic (with a buzzer) and visual (with indication LED dots). The acoustic alarm can be even muted through a special switch
- ▶ Optional: Safety door lock with key, temperature chart recorder

Application

Labocon -25°C Upright Freezer LUF-25-300 Series are suitable for storage of number of samples like plasma and test samples to biologicals, storage of life-saving and frozen blood supplies and vaccines, enzymes for genetic research, temperature sensitive materials, reagents and other media.

Specification

Model	LUF-25-301	LUF-25-302	LUF-25-303
Capacity (L)	140 L	380 L	640 L
Temp. range	adjustable between -5°C / -25°C		
Shelf loading capability (Kg)	30		
Shelf dimensions (W x D) mm	650x500		
Overall Dimension (W x D x H) (mm)	600x620x840	600x620x1870	780x730x1870
Weight (kg)	60/70 kg	100/120 kg	110/130 kg
Power supply	220V/50Hz		
Catalog no.	9428189181	9428190181	9428191181

-25°C FREEZER UPRIGHT LUF-25-400 SERIES

Labocon -25°C Upright Freezer LUF-25-400 Series offers reliability essential for the protection of sensitive lab samples infinitely adjustable between -5°C / -25°C. Our freezers combine superior performance with cost-effective operation and innovative features.

Features

- ▶ Sheet steel epoxy coated white colour (rust-proof material) outside and atoxic plastic material inside
- ▶ Internal corners are rounded to make easy any cleaning operation
- ▶ High density (40 Kg/m³) polyurethane insulation
- ▶ Insulation thickness: 50 mm
- ▶ Hinged door made of perimetrical aluminium frame, white colour and three layers of heated tempered insulating glass, with vacuum among the glass layers and heating film. It is provided with removable magnetic rubber gasket and flush-fitting type door handle. The door is also fitted with a spring loaded automatic closing device for openings inferior then 90°
- ▶ 3 easily adjustable open wire shelves made of sheet steel with a strong plastic coating
- ▶ Internal lighting: 1 bulb mounted in the bottom part of the control panel with automatic activation at every door opening through a special switch
- ▶ Control panel: microprocessor operating with soft-touchpads and 3.5" colour display LCD display. The control panel is battery operating in order to grant the functioning of the alarms even in case of power failure. The main functions of the control panel are :
 - ▶ Digital temperature adjusting and displaying with an accuracy of 0.5°C
 - ▶ Keyboard password protected with automatic locking
 - ▶ Back-up battery with automatic recharging
 - ▶ Icon based menu
 - ▶ Real-time graphical temperature chart
 - ▶ Data-logging function through USB port with direct download of Excel file)
 - ▶ GSM/GPRS telephone dialer
- ▶ Events memory with the possibility of checking from the display, defrostings, door openings, relays status, etc.
- ▶ Cooling unit mounted at the bottom with a condensing unit compounded by a hermetic compressor

and a finned condenser, air cooled through a fan

- ▶ Refrigeration: forced-air circulation
- ▶ Refrigerant : R404a CFC-free
- ▶ Defrosting: completely automatic, thermostat controlled. The condensate water is automatically channeled into an heated tray, located in the motor compartment, for the automatic evaporation of the condensate water
- ▶ Plug : Schuko type
- ▶ Breakers : 2 glass cartridge fuses with a rating of 10A, at protection of the appliance
- ▶ Noise level (dB(A)) : ≤ 52
- ▶ Safety functions: Visual and acoustic alarm signaling (with automatic resetting) for high and low temperature, door ajar, delayed of 3 minutes to allow the standard operations , power failure, battery discharged, condenser dirty, anti-freezing evaporator , sensors failure. NO/NC contact to remote the alarm signals
- ▶ Optional:
 - ▶ Extra wire shelf
 - ▶ Stainless steel drawer
 - ▶ Plastic partitions for drawers
 - ▶ Front top for drawers
 - ▶ Kit of castors
 - ▶ Safety door lock with key
 - ▶ Temperature chart recorder
 - ▶ Electronic temperature printer
 - ▶ Data logger function with USB port
 - ▶ Ballasted sensor for simulation of product temperature alarm
 - ▶ Internal electrical socket
 - ▶ Different voltage



LUF-25-401

Application

Labocon -25°C Upright Freezer LUF-25-400 Series are suitable for storage of number of samples like plasma and test samples to biologicals, storage of life-saving and frozen blood supplies and vaccines, enzymes for genetic research, temperature sensitive materials, reagents and other media.

Specification

Model	LUF-25-401	LUF-25-402	LUF-25-403
Capacity (L)	140 L	270 L	370 L
Temp. range	adjustable between -5°C to -20°C/-25°C		
Shelf loading capability (Kg)	30 (with uniformly stored material)		
Shelf dimensions (W x D) mm	460x470		
Temperature Sensor	Pt1000		
Interface	RS 485		
Overall Dimension (W x D x H) (mm)	600x620x940	600x650x1640	600X600X1920
Weight (kg)	60/70 kg	80/100 kg	95/115 kg
Power supply	220V/50Hz		
Catalog no.	9428192181	9428193181	9428194181

Model	LUF-25-404	LUF-405	LUF-406
Capacity (L)	440 L	530 L	625 L
Temp. range	adjustable between -5°C to -20°C/-25°C		
Shelf loading capability (Kg)	30 (with uniformly stored material)		
Shelf dimensions (W x D) mm	460x470		
Temperature Sensor	Pt1000		
Interface	RS 485		
Overall Dimension (W x D x H) (mm)	600X700X1920	750X700X2100	750X820X2100
Weight (kg)	110/130 kg	165/185 kg	170/190 kg
Power supply	220V/50Hz		
Catalog no.	9428195181	9428196181	9428197181

-25°C FREEZER CHEST LCF-25-100 SERIES

Labocon -25°C Chest type Freezer LCF-25-100 Series is designed to provide dependable, versatile and energy efficient performance. These freezers are primarily used for storage purposes. A microprocessor system ensures safe product storage as well as accurate temperature control and regulation.

Features

- ▶ Interior is made up of high quality aluminium liner
- ▶ Door with safety lock
- ▶ Ultra-microcellular Freon-free foaming technology facilitates outstanding temperature preservation
- ▶ Microprocessor-based temperature controller
- ▶ Digital temperature display
- ▶ CFC-free refrigerant
- ▶ Optimized evaporation and condensation system
- ▶ High quality compressor: low energy consumption, low noise level and low heat dissipation
- ▶ Drainage hole at the bottom of the freezer
- ▶ Safety functions: High and low temperature alarm, sensor failure alarm, both either by buzzer or digital flash alarming



LCF-25-101

Application

Labocon -25°C Chest type Freezer LCF-25-100 Series is suitable for storage of number of samples like plasma and test samples to biologicals, storage of life-saving and frozen blood supplies and vaccines, enzymes for genetic research, temperature sensitive materials, reagents and other media.

Specification

Model	LCF-25-101	LCF-25-102	LCF-25-103
Capacity (L)	147 L	203 L	263 L
Temp. range	-10°C to -25°C		
Overall Dimension (W x D x H) (mm)	739x564x837	964x564x837	1114x602x838
Power supply	220V/50Hz		
Catalog no.	9428198105	9428199105	9428200105

Model	LCF-25-104	LCF-25-105	LCF-25-106
Capacity (L)	322 L	389 L	525 L
Temp. range	-10°C to -25°C		
Overall Dimension (W x D x H) (mm)	1219x625x920	1412x705x874	1843x689x848
Power supply	220V/50Hz		
Catalog no.	9428201105	9428202105	9428203105

-25°C FREEZER CHEST LCF-25-200 SERIES

Labocon -25°C Chest type Freezer LCF-25-200 Series is designed to provide dependable, versatile and energy efficient performance. These freezers are primarily used for storage purposes. A microprocessor system ensures safe product storage as well as accurate temperature control and regulation.

Features

- ▶ Stainless Steel exterior and interior made of aluminum
- ▶ Rounded corners door design with lock
- ▶ Insulation thickness: 40mm
- ▶ Polycarbonate insulated inner doors
- ▶ Quick freezing function, i.e., it takes 2-3 hours to reach -25°C
- ▶ Digital temperature display
- ▶ Refrigerant: CFC free R134a
- ▶ High quality compressor: low energy consumption, low noise level and low heat dissipation
- ▶ 4 units Caster for easy handling
- ▶ Safety functions: Audible/visual alarm for high or low temperature alarm, system failure alarm
- ▶ Supplied with Steel Wire Basket (1 unit) to store samples
- ▶ Optional : Basket



Application

Labocon -25°C Chest type Freezer LCF-25-200 Series is suitable for storage of number of samples like plasma and test samples to biologicals, storage of life-saving and frozen blood supplies and vaccines, enzymes for genetic research, temperature sensitive materials, reagents and other media.

Specification

Model	LCF-25-201	LCF-25-202	LCF-25-203
Capacity (L)	110 L	166 L	196 L
Temp. range	-10°C to -25°C		
Overall Dimension (W x D x H) (mm)	549x549x845	556x906x937	556x1056x937
Power	145 W	160 W	180 W
Power supply	220V/50Hz		
Weight	30/40 kg	45/55 kg	50/60 kg
Catalog no.	9428204343	9428205343	9428206343

Model	LCF-25-204	LCF-25-205	LCF-25-206
Capacity (L)	226 L	358 L	508 L
Temp. range	-10°C to -25°C		
Overall Dimension (W x D x H) (mm)	556x1206x937	730x1204x968	730x1554x968
Power	207 W	320 W	375 W
Power supply	220V/50Hz		
Weight	55/65 kg	80/90 kg	100/110 kg
Catalog no.	9428207343	9428208343	9428209343

-25°C FREEZER CHEST LCF-25-300 SERIES

Labocon -25°C Chest type Freezer LCF-25-300 Series is designed to provide dependable, versatile and energy efficient performance. These freezers are primarily used for storage purposes. A microprocessor system ensures safe product storage as well as accurate temperature control and regulation.

Features

- ▶ Sheet steel epoxy coated white colour (rust-proof material) outside and atoxic plastic material inside
- ▶ Internal corners are rounded to make easy any cleaning operation
- ▶ High density (40 Kg/m³) polyurethane insulation
- ▶ Insulation thickness: 100 mm
- ▶ 2 feet adjustable in height for levelling and 2 casters mounted in the back side for easy handling
- ▶ Hinged, fully insulated lid made of sheet steel white epoxy coated outside and atoxic plastic material inside. The lid is fitted up with counterbalanced hinges, perimetric magnetic rubber gasket and security key locking
- ▶ Open wire baskets made in sheet steel white enameled
- ▶ Internal lighting : 1 bulb mounted in the internal side of the lid, with automatic activation at every lid opening through a special switch
- ▶ Defrosting : manual, with discharging hole for draining facilities for the derivate water
- ▶ Refrigerant : CFC- and HCFC-free
- ▶ Refrigeration: static with evaporating pipes
- ▶ Control panel with soft touch pads
- ▶ LED display and settings buttons
- ▶ Cooling unit mounted at the bottom with a condensing unit compounded by a hermetic compressor and a condenser with evaporating pipes
- ▶ Safety functions:
 - ▶ Alarm: for both high temperature and lid open. The alarm signaling is visual (with a red colour LED) and acoustic (through a buzzer) for high temperature while acoustic only for lid open. The alarm works only in case of presence of electricity
 - ▶ Super freezing switch: increasing the freezing capabilities in case of new material to be frozen
- ▶ Optional: Temperature Chart Recorder

Application

Labocon -25°C Chest type Freezer LCF-25-300 Series is suitable for storage of number of samples like plasma and test samples to biologicals, storage of life-saving and frozen blood supplies and vaccines, enzymes for genetic research, temperature sensitive materials, reagents and other media.

Specification

Model	LCF-25-301	LCF-25-302	LCF-25-303	LCF-25-304
Capacity (L)	140 L	240 L	350 L	440 L
Temp. range	-10°C to -25°C			
Baskets	1	3	5	6
Overall Dimension (W x D x H) (mm)	550x760x910	870x760x920	1370x810x920	1650x810x920
Power supply	220V/50Hz			
Weight	50/60 kg	80/90 kg	110/125 kg	120/135 kg
Catalog no.	9428210181	9428211181	9428212181	9428213181



LCF-25-301



LCF-25-302

-40°C FREEZER UPRIGHT LUF-40-100 SERIES

Labocon -40°C Freezer Upright LUF-40-100 Series have been designed for storing materials that demand constant temperature. A microprocessor system ensures safe product storage as well as accurate temperature control and regulation.

Features

- ▶ Exterior made of painted steel board and interior of ABS liner
- ▶ Door with safety lock and rotatable sure-grip door handle
- ▶ LCD display
- ▶ Microprocessor temperature controller
- ▶ Refrigerant: CFC free R507
- ▶ Danfoss compressor and EBM fan motor
- ▶ 4 units Casters for easy handling
- ▶ 4-7 units drawers made of plastic inside
- ▶ Safety functions: audio/ visual alarm function, system failure alarm
- ▶ Optional: Chart Order

Application

Labocon -40°C Freezer Upright LUF-40-100 Series is suitable for storing laboratory materials such as vaccines, biological samples, enzymes, protein samples, etc.

Specification

Model	LUF-40-101	LUF-40-102	LUF-40-103	LUF-40-104	LUF-40-105
Capacity (L)	90 L	206 L	270 L	362 L	525 L
Temp. range	-10°C to -40°C				
Overall Dimension (W x D x H) (mm)	623x544x842	700x656x1405	700x600x1750	930x731x1627	880x812x1869
Internal Dimension	438x388x539	506x451x1007	440x400x1490	658x426x1290	684x612x1184
Weight (Net/ Gross) (kg)	45/50 kg	-	65/70 kg	102/110 kg	-
Power supply	220V/50Hz				
Catalog no.	9428133343	9428134105	9428135343	9428136343	9428137105



LUF - 40 - 101

-40°C FREEZER UPRIGHT LUF-40-200 SERIES

Labocon -40°C Freezer Upright LUF-40-200 Series have been designed for storing materials that demand constant temperature. A microprocessor system ensures safe product storage as well as accurate temperature control and regulation.

Features

- ▶ Sheet steel epoxy coated white colour (rust-proof material) outside and atoxic plastic material inside
- ▶ Internal corners are rounded to make easy any cleaning operation
- ▶ High density (40 Kg/m³) polyurethane insulation
- ▶ Insulation thickness: 50 mm
- ▶ Hinged door made of perimetrical aluminum frame, white colour and three layers of heated tempered insulating glass, with vacuum among the glass layers and heating film. It is provided with removable magnetic rubber gasket and flush-fitting type door handle. The door is also fitted with a spring loaded automatic closing device for openings inferior then 90°
- ▶ 3 easily adjustable open wire shelves made of sheet steel with a strong plastic coating
- ▶ Internal lighting : 1 bulb mounted in the bottom part of the control panel with automatic activation at every door opening through a special switch
- ▶ Control panel: microprocessor operating with soft-touchpads and 3.5" colour display LCD display. The control panel is battery operating in order to grant the functioning of the alarms even in case of power failure. The main functions of the control panel are :
 - ▶ Digital temperature adjusting and displaying with an accuracy of 0.5°C
 - ▶ Keyboard password protected with automatic locking
 - ▶ Back-up battery with automatic recharging
 - ▶ Icon based menu
 - ▶ Real-time graphical temperature chart
 - ▶ Data-logging function through USB port with direct download of Excel file)
 - ▶ GSM/GPRS telephone dialer
- ▶ Events memory with the possibility of checking from the display, defrostings, door openings, relays

- ▶ status, etc.
- ▶ Internal ventilation setting
- ▶ Cooling unit mounted at the bottom with a condensing unit compounded by a hermetic compressor and a finned condenser, air cooled through a fan
- ▶ Refrigeration: forced-air circulation
- ▶ Refrigerant : R404a CFC-free
- ▶ Defrosting: completely automatic, thermostat controlled. The condensate water is automatically channeled into an heated tray, located in the motor compartment, for the automatic evaporation of the condensate water
- ▶ Plug : Schuko type
- ▶ Breakers : 2 glass cartridge fuses with a rating of 10A, at protection of the appliance
- ▶ Noise level (dB(A)) : ≤ 60
- ▶ Safety functions: Visual and acoustic alarm signaling (with automatic resetting) for high and low temperature, door ajar, delayed of 3 minutes to allow the standard operations , power failure, battery discharged, condenser dirty, anti-freezing evaporator , sensors failure. NO/NC contact to remote the alarm signals
- ▶ Optional:
 - ▶ Extra wire shelf
 - ▶ Stainless steel drawer
 - ▶ Plastic partitions for drawers
 - ▶ Front top for drawers
 - ▶ Kit of castors
 - ▶ Safety door lock with key
 - ▶ Temperature chart recorder
 - ▶ Electronic temperature printer
 - ▶ Data logger function with USB port
 - ▶ Ballasted sensor for simulation of product temperature alarm
 - ▶ Internal electrical socket
 - ▶ Different voltage

Application

Labocon -40°C Freezer Upright LUF-40-200 Series suitable for storing laboratory materials such as vaccines, biological samples, enzymes, protein samples, etc.

Specification

Model	LUF-40-201	LUF-40-202	LUF-40-203	LUF-40-204	LUF-40-205
Capacity (L)	270 L	370 L	440 L	530 L	625 L
Temp. range	adjustable between -25°C / -40°C				
Shelf loading capability (Kg)	30				
Shelf dimensions (W x D) mm	460 x 470				
Temperature Sensor	Pt1000				
Interface	RS 485				
Overall Dimension (W x D x H) (mm)	700x830x1850	700x800x2180	700x800x2180	850x980x2260	850x980x2260
Internal Dimension	600x760x1670	600x640x1920	600x740x1920	750x740x2100	750x860x2100
Weight (Net/ Gross)(kg)	95/115 kg	110/130 kg	125/145 kg	175/195 kg	180/200 kg
Power supply	220V/50Hz				
Catalog no.	9428138181	9428139181	9428140181	9428141181	9428142181

-40°C FREEZER CHEST LUF-40-100 SERIES

Labocon brings to you -40°C Freezer Chest type LCF-40-200 Series with broad range of capacities, accurate temperature control, best quality refrigeration system and low maintenance. They are equipped with reliable temperature control, quiet operation and ease of use.

Features

- ▶ Interior is made up of high quality aluminium liner
- ▶ Door with safety lock
- ▶ Ultra-microcellular Freon-free foaming technology facilitates outstanding temperature preservation
- ▶ Microprocessor-based temperature controller
- ▶ Digital temperature display
- ▶ CFC-free refrigerant
- ▶ Optimized evaporation and condensation system
- ▶ High quality compressor and EBM fan electromotor: low energy consumption, low noise level and low heat dissipation
- ▶ Drainage hole at the bottom of the freezer
- ▶ 4 units Caster for easy handling
- ▶ Safety functions: High and low temperature alarm, sensor failure alarm, both either by buzzer or digital flash alarming

Application

Labocon -40°C Freezer Chest type LCF-40-100 Series are suitable for optimum & controlled temperature aid in storage needs of the pharmacy, medical, industry, biotech & clinical applications.

Specification

Model	LCF-40-101	LCF-40-102	LCF-40-103	LCF-40-104	LCF-40-105
Capacity (L)	102 L	148 L	233 L	300 L	390 L
Temp. range	-10°C to -40°C				
Overall Dimension (W x D x H) (mm)	594x643x1036	778x643x1036	954x710x838	1154x710x838	1412x710x838
Power supply	220V/50Hz				
Catalog no.	9428143105	9428144105	9428145105	9428146105	9428147105



LCF -40°C - 101

-40°C FREEZER CHEST LUF-40-200 SERIES

Labocon brings to you -40°C Freezer Chest type LCF-40-200 Series with broad range of capacities, accurate temperature control, best quality refrigeration system and low maintenance. They are equipped with reliable temperature control, quiet operation and ease of use.

Features

- ▶ Stainless steel interior and painted steel board exterior
- ▶ Door with safety lock
- ▶ Insulation thickness: 90 mm
- ▶ Polycarbonate insulated inner doors
- ▶ Microprocessor temperature control
- ▶ Digital temperature display
- ▶ Refrigerant: CFC free R507
- ▶ High quality compressor and EBM fan motor: low energy consumption, low noise level and low heat dissipation
- ▶ Safety functions: Audible/visual alarm for high or low temperature alarm, system failure alarm
- ▶ 4 units Caster for easy handling
- ▶ Supplied with Steel Wire Basket (1 unit) to store samples
- ▶ Optional : Basket

Application

Labocon -40°C Freezer Chest type LCF-40-200 Series are suitable for optimum & controlled temperature aid in storage needs of the pharmacy, medical, industry, biotech & clinical applications.

Specification

Model	LCF-40-201	LCF-40-202	LCF-40-203
Capacity (L)	110 L	251 L	351 L
Temp. range	-10°C to -40°C		
Overall Dimension (W x D x H) (mm)	583x619x870	730x1204x968	730x1554x968
Power	260 W	265 W	300 W
Power supply	220V/50Hz		
Weight (Net/Gross)	34/38 kg	86/90 kg	102/110 kg
Catalog no.	9428143343	9428144343	9428145343

-40°C FREEZER CHEST LUF-40-300 SERIES

Labocon brings to you -40°C Freezer Chest type LCF-40-300 Series with broad range of capacities, accurate temperature control, best quality refrigeration system and low maintenance. They are equipped with reliable temperature control, quiet operation and ease of use.

Features

- ▶ Sheet steel epoxy coated white colour (rust-proof material) outside and atoxic plastic material inside
- ▶ Internal corners are rounded to make easy any cleaning operation
- ▶ High density (40 Kg/m³) polyurethane insulation
- ▶ Insulation thickness: 100 mm
- ▶ Hinged, fully insulated lid made of sheet steel white epoxy coated outside and atoxic plastic material inside. The lid is fitted up with counterbalanced hinges, perimetric magnetic rubber gasket and security key locking
- ▶ Control panel: microprocessor operating with soft-touchpads and 3.5" colour display LCD display. The control panel is battery operating in order to grant the functioning of the alarms even in case of power failure. The main functions of the control panel are :
 - ▶ Digital temperature adjusting and displaying with an accuracy of 0.5°C
 - ▶ Keyboard password protected with automatic locking
 - ▶ Back-up battery with automatic recharging
 - ▶ Icon based menu
 - ▶ Real-time graphical temperature chart
 - ▶ Data-logging function through USB port with direct download of Excel file)
 - ▶ GSM/GPRS telephone dialer
- ▶ Events memory with the possibility of checking from the display, defrostings, door openings, relays status, etc.
- ▶ Cooling unit mounted at the bottom with a condensing unit compounded by a hermetic compressor and a finned air cooled condenser
- ▶ Refrigeration: static with evaporating pipes
- ▶ Refrigerant : CFC- and HCFC-free
- ▶ Defrosting : manual, with discharging hole for draining facilities for the derivate water
- ▶ Plug : Schuko type

- ▶ Noise level (dB(A)) : ≤ 52
- ▶ Safety functions: Visual and acoustic alarm signaling (with automatic resetting) for high and low temperature, door ajar, delayed of 3 minutes to allow the standard operations , power failure, battery discharged, condenser dirty, anti-freezing evaporator , sensors failure. NO/NC contact to remote the alarm signals
- ▶ Optional:
 - ▶ Wire basket
 - ▶ Kit of rollers
 - ▶ Temperature chart recorder
 - ▶ Electronic temperature printer
 - ▶ Data logger function with USB port
 - ▶ Ballasted sensor for simulation of product temperature alarm
 - ▶ Different voltage



Application

Labocon -40°C Freezer Chest type LCF-40-300 Series are suitable for optimum & controlled temperature aid in storage needs of the pharmacy, medical, industry, biotech & clinical applications.

Specification

Model	LCF-40-301	LCF-40-302	LCF-40-303	LCF-40-304	LCF-40-305
Capacity (L)	120 L	220 L	320 L	390 L	420 L
Temp. range	adjustable between -20°C and -45°C				
Temperature Sensor	Pt1000				
Interface	RS 485				
Overall Dimension (W x D x H) (mm)	1110x850x1120	1440x850x1120	1690x850x1120	1890x850x1120	2090x850x1120
Power supply	220V/50Hz				
Weight (Net/Gross)	70/80 kg	90/110 kg	110/130 kg	120/140 kg	130/150 kg
Catalog no.	9428143105	9428144105	9428145105	9428146105	9428147105

-65°C ULT FREEZER UPRIGHT LUF-65-100 SERIES

Labocon -65°C Upright Freezer LUF-65-100 Series are widely used in scientific research for long-term storage of samples. They offer excellent uniformity, effective cooling technology and temperature upto -65°C with 1°C controlling precision.

Features

- ▶ Stainless steel interior and painted steel board exterior
- ▶ Front lockable door design with full height handle and vacuum release port
- ▶ Two-times foaming technology with double silicon gasket seal
- ▶ Adjustable 2-3 stainless steel shelves with inner door
- ▶ Insulation thickness: 100 - 155 mm
- ▶ Polycarbonate insulated inner doors
- ▶ Digital temperature display
- ▶ Microprocessor-based temperature controller
- ▶ Two units of Danfoss compressor in parallel connection to reduce noise and improve the cooling rate
- ▶ EBM fan electromotor
- ▶ Unique refrigeration circulation and unipolar compressor oil-lubricated technology
- ▶ Mixed Refrigerant: CFC Free R134a, R404a, R23, R410A, N2
- ▶ Temperature printer which record 7 days data
- ▶ 72 hours battery backup for printer and controller display
- ▶ Keyboard lock and password protected configuration page
- ▶ 4 units casters for easy handling
- ▶ Safety functions: audible and visual alarm for high or low temperature, power failure, low battery, door open, filter blocking, system failure
- ▶ Optional: Chart recorder, CO2 back up system, storage racks/boxes, remote alarm system

Application

Labocon -65°C Upright Freezer LUF-65-100 Series is suitable for optimum and controlled temperature aid in storage needs of the pharmacy, medical, industry, biotech & clinical applications.

Specification

Model		LUF-65-101	LUF-65-102	LUF-65-103	LUF-65-104
Capacity (L)		100 L	218 L	328 L	388 L
Temp. range		-10°C to -65°C			
Dimension (W x D x H) (mm)	Overall	720x793x1000	940x840x1552	940x840x1999	940x840x1999
	Internal	450x450x500	582x470x768	580x450x1200	740x450x1200
Power		800 W	1000 W	1500 W	1800 W
Power supply		220V/110V , 50Hz/60Hz			
Weight (Net/Gross) (kg)		120/140 kg	225/250 kg	320/350 kg	330/360 kg
Catalog no.		9428148343	9428149343	9428150343	9428151343



LCF -65°C - 201

Model		LUF-65-105	LUF-65-106	LUF-65-107
Capacity (L)		538 L	668 L	768 L
Temp. range		-10°C to -65°C		
Dimension (W x D x H) (mm)	Overall	940x840x1999	996x1075x1997	996x1190x1997
	Internal	662x600x1330	815x667x1200	930x665x1200
Power		2000 W	2700 W	2700 W
Power supply		220V/110V , 50Hz/60Hz		
Weight (Net/Gross) (kg)		360/380 kg	400/420 kg	420/450 kg
Catalog no.		9428152343	9428153343	9428154343

Optional Accessories

Model no.	Accessory	Catalog no.
LR-03	Temperature Chart Recorder	9428155343
LCBS-01	1 CO2 Backup System	9428156343
LRA-01	Storage Racks	9428157343
LBX-01	Boxes	9428158343

-65°C ULTRA LOW TEMPERATURE FREEZER CHEST LCF-100 SERIES

Labocon -65°C Chest Type Freezer LCF-65-100 Series are widely used in scientific research for long-term storage of samples. They offer excellent uniformity, effective cooling technology and temperature upto -65°C with 1°C controlling precision.

Features

- ▶ Stainless steel interior and painted steel board exterior
- ▶ Door with key lock and rotatable door handle
- ▶ Two-times foaming technology with double seal design
- ▶ Insulation thickness: 155 mm
- ▶ Digital temperature display
- ▶ Microprocessor-based temperature controller
- ▶ Danfoss compressor and EBM fan electromotor
- ▶ Unique refrigeration circulation and unipolar compressor oil-lubricated technology
- ▶ Mixed Refrigerant: CFC Free R134a, R404a, R23, R410A, N2
- ▶ Temperature printer which record 7 days data
- ▶ 72 hours battery backup for printer and controller display
- ▶ Keyboard lock and password protected configuration page
- ▶ 4 units casters for easy handing
- ▶ Safety functions: audible and visual alarm for high or low temperature, power failure, low battery, door open, filter blocking, system failure
- ▶ Optional: Chart recorder, CO2 back up, storage racks/boxes, remote alarm system.

Application

Labocon -65° Freezer Chest Type LCF-65-100 Series is widely used in hospitals, clinics, blood banks and research institutes for incubation or preservation of plasma, tissue cultures, microbial cultures etc.

Specification

Model		LCF-65-101	LCF-65-102
Capacity (L)		138 L	328 L
Temp. range		-10°C to -65°C	
Dimension (W x D x H) (mm)	Overall	890x1320x1009	890x2005x1009
	Internal	470x570x490	470x1200x582
Power		800 W	1500 W
Power supply		220V/110V , 50Hz/60Hz	
Weight (Net/Gross) (kg)		215/250 kg	260/330 kg
Catalog no.		9428159343	9428160343



LCF -65°C - 101

-65°C ULTRA LOW TEMPERATURE FREEZER CHEST LCF-200 SERIES

Labocon -65°C Chest Type Freezer LCF-65-200 Series are widely used in scientific research for long-term storage of samples. They offer excellent uniformity, effective cooling technology and temperature upto -65°C with 1°C controlling precision.

Features

- ▶ Sheet steel epoxy coated white colour (rust-proof material) inside and outside
- ▶ High density (40 Kg/m³) polyurethane insulation
- ▶ Insulation thickness: 100 mm
- ▶ Hinged, fully insulated lid made of sheet steel white epoxy coated outside and atoxic plastic material inside. The lid is fitted up with counterbalanced hinges, perimetric magnetic rubber gasket and security key locking
- ▶ Control panel: microprocessor operated digital electronic thermostat with incorporated alarm.
- ▶ LED display with red colour, bright indication and an accuracy of 1°C
- ▶ Cooling unit mounted at the bottom with a condensing unit compounded by a hermetic compressor, a finned air cooled condenser and an extra grill type condenser
- ▶ Refrigeration: static with evaporating pipes
- ▶ Refrigerant : CFC- and HCFC-free
- ▶ Defrosting : manual, with discharging hole for draining facilities for the derivate water
- ▶ Plug : Schuko type
- ▶ Noise level (dB(A)) : ≤ 54
- ▶ Safety functions: Visual and acoustic alarm signaling (with automatic resetting) for high and low temperature
- ▶ Optional:
 - ▶ Wire basket
 - ▶ Kit of rollers
 - ▶ Temperature chart recorder

Application

Labocon -65° Freezer Chest Type LCF-65-200 Series is widely used in hospitals, clinics, blood banks and research institutes for incubation or preservation of plasma, tissue cultures, microbial cultures etc.

Specification

Model		LCF-65-201	LCF-65-202	LCF-65-203	LCF-65-204	LCF-65-205
Model		120 L	220 L	320 L	390 L	420 L
Capacity (L)		730x730x 870	1060x730x870	1310x730x870	1500x730x870	1710x730x870
Temp. range		adjustable between -40°C and -60°C				
Dimension (W x D x H) (mm)	Overall	730x730x 870	1060x730x870	1310x730x870	1500x730x870	1710x730x870
	Internal	850x850x1120	1180x850x1120	1430x850 x1120	1630x850x1120	1830x850x1120
Power supply		220V/110V , 50Hz/60Hz				
Weight (Net/Gross) (kg)		70/80 kg	90/110 kg	110/130 kg	120/140 kg	130/150 kg
Catalog no.		9428161181	9428162181	9428163181	9428164181	9428165181



LCF -65°C - 201

-86°C ULTRA LOW TEMPERATURE FREEZER UPRIGHT LUF-86-100 SERIES

Labocon -86°C Ultra Low Temperature Freezer Upright LUF-86-100 Series ensures safe long-term storage of samples at -86°C with 1°C temperature precision. It offers reliable operation with capacities ranging from 100L to 828L, user-friendly microprocessor controller with digital display.

Features

- ▶ Stainless steel interior and painted steel board exterior
- ▶ Front lockable door design with full height handle and vacuum release port
- ▶ Two-times foaming technology with double silicon gasket seal
- ▶ Adjustable 2-3 stainless steel shelves with inner door
- ▶ Insulation thickness: 100 - 155 mm
- ▶ Polycarbonate insulated inner doors
- ▶ Digital temperature display
- ▶ Microprocessor-based temperature controller
- ▶ Two units of Danfoss compressor in parallel connection to reduce noise and improve the cooling rate
- ▶ EBM fan electromotor
- ▶ Unique refrigeration circulation and unipolar compressor oil-lubricated technology
- ▶ Mixed Refrigerant: CFC Free R134a, R404a, R23, R410A, N2
- ▶ Temperature printer which record 7 days data
- ▶ 72 hours battery backup for printer and controller display
- ▶ Keyboard lock and password protected configuration page
- ▶ 4 units casters for easy handling
- ▶ Safety functions: audible and visual alarm for high or low temperature, power failure, low battery, door open, filter blocking, system failure
- ▶ Optional: Chart recorder, CO2 back up system, storage racks/boxes, remote alarm system

Application

Labocon -86°C Ultra Low Temperature Freezer Upright LUF-86-100 Series is widely used in hospitals, clinics, blood banks and research institutes for incubation or preservation of plasma, tissue cultures, microbial cultures etc.

Specification

Model		LUF-86-101	LUF-86-102	LUF-86-103	LUF-86-104
Capacity (L)		100 L	218 L	328 L	388 L
Temp. range		-10°C to -86°C			
Overall Dimension (W x D x H) (mm)	Overall	720x793x1000	940x840x1552	940x840x1999	940x840x1999
	Internal	450 x 450 x 500	582x470x768	580x450x1200	740x450x1200
Power supply		220V/110V, 50Hz		220V/50Hz	220V/110V, 50Hz
Weight (Net/ Gross) (kg)		120/140 kg	225/250 kg	320/350 kg	330/360 kg
Catalog no.		9428101343	9428102343	9428103343	9428104343



LCF -86°C - 101



LCF -86°C - 109

Model		LUF-86-105	LUF-86-106	LUF-86-107	LUF-86-108
Capacity (L)		538 L	668 L	768 L	828 L
Temp. range		-10°C to -86°C			
Overall Dimension (W x D x H) (mm)	Overall	940x840x1999	996x1075x1997	996x1190x1997	1230x996x2056
	Internal	662x600x1330	815x667x1200	930x665x1200	930x710x1308
Power supply		220V/110V, 50Hz			
Weight (Net/ Gross) (kg)		360/380 kg	400/420 kg	420/450 kg	430/460 kg
Catalog no.		9428105343	9428106343	9428107343	9428108343

Optional Accessories

Model no.	Accessory	Catalog no.
LR-03	Temperature Chart Recorder	9428109343
LCBS-01	CO2 Backup System	9428110343
LRA-01	Storage Racks	9428111343
LBX-01	Boxes	9428112343
LR-02	Remote Alarm System	9428113343

-86 ULTRA LOW TEMPERATURE FREEZER UPRIGHT LUF-86-200 SERIES

Labocon -86°C Ultra Low Temperature Freezer Upright LUF-86-200 Series ensures safe long-term storage of samples at -86°C with 1°C temperature precision. It offers reliable operation with capacities ranging from 120L to 710 L, user-friendly microprocessor controller with digital display.

Features

- ▶ Sheet steel epoxy coated white colour (rust-proof material) inside and outside
- ▶ High density polyurethane insulation
- ▶ Insulation thickness: 130 mm
- ▶ Castors mounted in the front side are fitted up with brakes with foot lever control to block them once the freezer has been positioned
- ▶ Hinged door fully insulated externally, while internally it has non-conductive material. A perfect hermetic closing is assured through a double gasket system. The gaskets are provided with a special heating system to prevent the freezing. The vacuum-release valve ensures that the door can be immediately re-opened on closing. In the right part of the door is mounted the effort-free locking mechanism which incorporate the safety key lock
- ▶ The inner doors prevent air-cold loss at the external door opening and they are also provided with a locking mechanism with a lever
- ▶ 3 easily adjustable open wire shelves made of sheet steel with a strong plastic coating
- ▶ Control panel: microprocessor operating with soft-touchpads and 3.5" colour display LCD display. The control panel is battery operating in order to grant the functioning of the alarms even in case of power failure. The main functions of the control panel are :
 - ▶ Digital temperature adjusting and displaying with an accuracy of 0.5°C
 - ▶ Warning lamp signaling when the cooling unit is ON
 - ▶ Keyboard block with password protection
 - ▶ Real-time graphical temperature chart
 - ▶ Data-logging function through USB port with direct download of Excel file)
 - ▶ GSM/GPRS telephone dialer

- ▶ Cooling unit mounted at the bottom with a condensing unit compounded by 2 hermetic compressor with a power of 0.5 HP each, a finned air cooled condenser
- ▶ Refrigeration: static with evaporating pipes
- ▶ Refrigerant : CFC-free
- ▶ Plug : Schuko type
- ▶ Breakers : 2 glass cartridge fuses with a rating of 10A, at protection of the appliance
- ▶ Noise level (dB(A)) : ≤ 52
- ▶ Safety functions: Visual and acoustic alarm for:
 - ▶ High or low temperature with programmable limits
 - ▶ Door ajar, delayed of 30 seconds to allow the standard operations
 - ▶ Power failure
 - ▶ Dirty condenser that limit the cooling unit performances
 - ▶ Discharged battery with the possibility to display the charging status
 - ▶ Temporally muting of the acoustic alarms, with automatic re-activation in case the alarm conditions continues
- ▶ Optional:
 - ▶ Storage rack for boxes
 - ▶ Box for storage rack
 - ▶ CO2 back-up system
 - ▶ Temperature chart recorder
 - ▶ Gloves
 - ▶ Different voltage



LCF -86°C - 201

Application

-86°C Ultra Low Temperature Freezer Upright LUF-86-200 Series is widely used in hospitals, clinics, blood banks and research institutes for incubation or preservation of plasma, tissue cultures, microbial cultures etc.

Specification

Model		LUF-86-201	LUF-86-202	LUF-86-203
Capacity (L)		120 L	240 L	360 L
Temp. range		-60°C to -86°C		
Overall Dimension (W x D x H) (mm)	Overall	950x950x1580	950x950x2130	970x1070x2250
	Internal	750x790x1330	750x790x1890	760x890x1990
Power supply		220V/50Hz		
Weight (Net/ Gross) (kg)		210/230 kg	250/280 kg	270/300 kg
Catalog no.		9428114181	9428115181	9428116181

Model		LUF-86-204	LUF-86-205	LUF-86-206
Capacity (L)		480 L	600 L	710 L
Temp. range		-60°C to -86°C		
Overall Dimension (W x D x H) (mm)	Overall	1070x1070x2250	1270x1070x2250	1400x1070x2250
	Internal	910x890x1990	1060x890x1990	1200x890x1990
Power supply		220V/50Hz		
Weight (Net/ Gross) (kg)		310/340 kg	350/390 kg	380/420 kg
Catalog no.		9428117181	9428118181	9428119181

-86°C ULTRA LOW TEMPERATURE FREEZER CHEST LCF-86-100 SERIES

Labocon -86°C Ultra Low Temperature Freezer Chest type LCF-86-100 Series has the finest standards of quality construction and excellent refrigeration system. These are equipped with durable steel, audio / visual alarm function and CFC free refrigerant.

Features

- ▶ Stainless steel interior and painted steel board exterior
- ▶ Door with key lock and rotatable door handle
- ▶ Two-times foaming technology with double seal design
- ▶ Insulation thickness: 155 mm
- ▶ Digital temperature display
- ▶ Microprocessor-based temperature controller
- ▶ Danfoss compressor and EBM fan electromotor
- ▶ Unique refrigeration circulation and unipolar compressor oil-lubricated technology
- ▶ Mixed Refrigerant: CFC Free R134a, R404a, R23, R410A, N2
- ▶ Temperature printer which record 7 days data
- ▶ 72 hours battery backup for printer and controller display
- ▶ Keyboard lock and password protected configuration page
- ▶ 4 units casters for easy handling
- ▶ Safety functions: audible and visual alarm for high or low temperature, power failure, low battery, door open, filter blocking, system failure
- ▶ Optional: Chart recorder, CO2 back up, storage racks/boxes, remote alarm system

Application

Labocon -86°C Ultra Low Temperature Freezer Chest type LCF-86-100 Series is widely used in hospitals, clinics, blood banks and research institutes for incubation or preservation of plasma, tissue cultures, microbial cultures etc.

Specification

Model		LCF-86-101	LCF-86-102	LCF-86-103	LCF-86-104	LCF-86-105
Capacity (L)		50 L	138 L	328 L	400 L	668 L
Temp. range		-10°C to -86°C				
Overall Dimension (W x D x H) (mm)	Overall	600x560x910	890x1320x1009	890x2005x1009	890x2005x1009	1150x2050x1009
	Internal	343x343x415	470x570x490	470x1200x582	540x1270x590	815x1200x660
Power supply		300 W	800 W	1500 W	1500 W	2500 W
Weight (Net/ Gross) (kg)		60/66 kg	230/250 kg	300/320 kg	320/340 kg	340/360 kg
Catalog no.		9428120343	9428121343	9428122343	9428123343	9428124343



LCF -86°C - 101

-105°C ULTRA LOW TEMPERATURE FREEZER UPRIGHT LUCF-105-100 SERIES

Labocon -105°C Ultra Low Temperature Upright Freezer LUCF-105-100 Series are designed for storing sensitive materials which demand uniform temperature. Our freezers combine the highest reliability and superior performance with cost-effective operation and innovative features.

Features

- ▶ Stainless steel interior and painted steel board exterior
- ▶ Door with key lock and rotatable door handle
- ▶ Two-times foaming technology with double seal design
- ▶ Insulation thickness: 155 mm
- ▶ Digital temperature display
- ▶ Microprocessor-based temperature controller
- ▶ Danfoss compressor and EBM fan electromotor
- ▶ Unique refrigeration circulation and unipolar compressor oil-lubricated technology
- ▶ Mixed Refrigerant: CFC Free R134a, R404a, R23, R410A, N2
- ▶ Temperature printer which record 7 days data
- ▶ 72 hours battery backup for printer and controller display
- ▶ Keyboard lock and password protected configuration page
- ▶ 4 units casters for easy handling
- ▶ Safety functions: audible and visual alarm for high or low temperature, power failure, low battery, door open, filter blocking, system failure
- ▶ Optional: Chart recorder, CO2 back up, storage racks/boxes, remote alarm system



Application

Labocon -105°C Ultra Low Temperature Upright Freezer LUCF-105-100 Series is widely used in hospitals, clinics, blood banks and research institutes for incubation or preservation of plasma, tissue cultures, microbial cultures etc.

Specification

Model	LUCF-105-101
Volume (L)	328 L
Temp. range	-10°C to -105°C
External Dimension (W x D x H) (mm)	940x840x1999
Internal Dimension (W x D x H) (mm)	582x470x1200
Weight (Net/ Gross) (kg)	320/350 kg
Power	1500 W
Power supply	220V/110V,60/50Hz
Catalog no.	9428166343

Optional Accessories

Model no.	Accessory	Catalog no.
LR-03	Temperature Chart Recorder	9428167343
LCBS-01	CO2 Backup System	9428168343
LRA-01	Storage Racks	9428169343
LBX-01	Boxes	9428170343

-105°C ULTRA LOW TEMPERATURE FREEZER CHEST LCCF-105-100 SERIES

Labocon Ultra Low Temperature Chest type Freezer LCCF-105-100 Series are designed for storing sensitive materials which demand uniform temperature. Our freezers combine the highest reliability and superior performance with cost-effective operation and innovative features.

Features

- ▶ Stainless steel interior and painted steel board exterior
- ▶ Door with key lock and rotatable door handle
- ▶ Two-times foaming technology with double seal design
- ▶ Insulation thickness: 155 mm
- ▶ Digital temperature display
- ▶ Microprocessor-based temperature controller
- ▶ Danfoss compressor and EBM fan electromotor
- ▶ Unique refrigeration circulation and unipolar compressor oil-lubricated technology
- ▶ Mixed Refrigerant: CFC Free R134a, R404a, R23, R410A, N2
- ▶ Temperature printer which record 7 days data
- ▶ 72 hours battery backup for printer and controller display
- ▶ Keyboard lock and password protected configuration page
- ▶ 4 units casters for easy handling
- ▶ Safety functions: audible and visual alarm for high or low temperature, power failure, low battery, door open, filter blocking, system failure
- ▶ Optional: Chart recorder, LN2 back up, storage racks/boxes, remote alarm system



LCCF -105°C - 103

Application

Labocon -105°C Ultra Low Temperature Freezer Chest type LCCF-105-100 Series is widely used in hospitals, clinics, blood banks and research institutes for incubation or preservation of plasma, tissue cultures, microbial cultures etc.

Specification

Model		LCCF-105-101	LCCF-105-102
Capacity (L)		138 L	328 L
Temp. range		-10°C ~-105°C	
Dimension (W x D x H) (mm)	Overall	890x1320x1009	890x2005x1009
	Internal	470x570x490	470x1200x582
Power		1000 W	1800 W
Power Supply		220/110V, 60/50 Hz	
Weight (Net/ Gross)(kg)		215/250 kg	330/360 kg
Catalog no.		9428171343	9428172343

Specification

Model no.	Accessory	Catalog no.
LCBS-01	1 CO2 Backup System	9428178343
LRA-01	Storage Racks	9428179343
LBX-01	Boxes	9428180343

-135°C ULTRA LOW TEMPERATURE FREEZER CHEST LCCF-135-100 SERIES

Labocon Ultra Low Temperature Freezer Chest type LCCF-135-100 Series are designed for storing sensitive materials which demand uniform temperature. Our freezers combine the highest reliability and superior performance with cost-effective operation and innovative features.

Features

- ▶ Stainless steel interior and painted steel board exterior
- ▶ Door with key lock and rotatable door handle
- ▶ Two-times foaming technology with double seal design
- ▶ Insulation thickness: 155 mm
- ▶ Digital temperature display
- ▶ Microprocessor-based temperature controller
- ▶ Danfoss compressor and EBM fan electromotor
- ▶ Unique refrigeration circulation and unipolar compressor oil
- ▶ Mixed Refrigerant: CFC Free R134a, R404a, R23, R410A, N2
- ▶ Temperature printer which record 7 days data
- ▶ 72 hours battery backup for printer and controller display
- ▶ Keyboard lock and password protected configuration page
- ▶ 4 units casters for easy handling
- ▶ Safety functions: audible and visual alarm for high or low temperature, power failure, low battery, door open, filter blocking, system failure
- ▶ Optional: Chart recorder, LN2 back up, storage racks/boxes, remote alarm system



LCCF -135°C - 103

Application

Labocon -135°C Ultra Low Temperature Freezer Chest type LCCF-135-100 Series is widely used in hospitals, clinics, blood banks and research institutes for incubation or preservation of plasma, tissue cultures, microbial cultures etc.

Specification

Model		LCCF-135-101	LCCF-135-102
Capacity (L)		128 L	258 L
Temp. range		-90°C to -135°C	
Dimension (W x D x H) (mm)	Overall	880x1590x1040	890x2005x1009
	Internal	370x600x550	410x1140x552
Power		2200 W	3000 W
Power Supply		220/110V, 60/50 Hz	
Weight (Net/ Gross)(kg)		230/250 kg	300/320 kg
Catalog no.		9428173343	9428174343

Optional Accessories

Model no.	Accessory	Catalog no.
LCBS-01	1 CO2 Backup System	9428178343
LRA-01	Storage Racks	9428179343
LBX-01	Boxes	9428180343

-152°C CRYOGENIC FREEZER CHEST TYPE LCCF-152-100 SERIES

Labocon Cryogenic Chest type Freezer LCCF-152-100 Series is designed for storing sensitive materials which demand uniform temperature. Our freezers combine the highest reliability and superior performance with cost-effective operation and innovative features.

Features

- ▶ Stainless steel interior and painted steel board exterior
- ▶ Door with key lock and rotatable door handle
- ▶ Two-times foaming technology with double seal design
- ▶ Insulation thickness: 155 mm
- ▶ Digital temperature display
- ▶ Microprocessor-based temperature controller
- ▶ Danfoss compressor and EBM fan electromotor
- ▶ Unique refrigeration circulation and unipolar compressor oil-lubricated technology
- ▶ Mixed Refrigerant: CFC Free R134a, R404a, R23, R410A, N2
- ▶ Temperature printer which record 7 days data
- ▶ 72 hours battery backup for printer and controller display
- ▶ Keyboard lock and password protected configuration page
- ▶ 4 units casters for easy handling
- ▶ Safety functions: audible and visual alarm for high or low temperature, power failure, low battery, door open, filter blocking, system failure
- ▶ Optional: Chart recorder, LN2 back up, storage racks/boxes, remote alarm system



Application

Labocon Cryogenic Chest type Freezer LCCF-152-100 Series is ideal in comparison to liquid nitrogen storage as they avoid cross contamination across liquid phases from sample to sample. They are used to preserve stem cells and in environment & stress testing.

Specification

Model		LCCF-152-101	LCCF-152-102
Capacity (L)		128 L	258 L
Temp. range		-110°C to -152°C	
Dimension (W x D x H) (mm)	Overall	890x2085x1009	890x2005x1009
	Internal	410x1140x552	410x1140x552
Power		2200 W	4400 W
Power Supply		380V /50Hz or 220V/50Hz	
Weight (Net/Gross)		215/250 kg	330/360 kg
Catalog no.		9428175343	9428176343

Specification

Model no.	Accessory	Catalog no.
LCBS-01	1 CO2 Backup System	9428178343
LRA-01	Storage Racks	9428179343
LBX-01	Boxes	9428180343

-164°C CRYOGENIC FREEZER CHEST TYPE LCCF-164-100 SERIES

Labocon Cryogenic Chest type Freezer LCCF-164-100 Series is designed for storing sensitive materials which demand uniform temperature. Our freezers combine the highest reliability and superior performance with cost-effective operation and innovative features.

Features

- ▶ Stainless steel interior and painted steel board exterior
- ▶ Door with key lock and rotatable door handle
- ▶ Two-times foaming technology with double seal design
- ▶ Insulation thickness: 155 mm
- ▶ Digital temperature display
- ▶ Microprocessor-based temperature controller
- ▶ Danfoss compressor and EBM fan electromotor
- ▶ Unique refrigeration circulation and unipolar compressor oil-lubricated technology
- ▶ Mixed Refrigerant: CFC Free R134a, R404a, R23, R410A, N2
- ▶ Temperature printer which record 7 days data
- ▶ 72 hours battery backup for printer and controller display
- ▶ Keyboard lock and password protected configuration page
- ▶ 4 units casters for easy handling
- ▶ Safety functions: audible and visual alarm for high or low temperature, power failure, low battery, door open, filter blocking, system failure
- ▶ Optional: Chart recorder, LN2 back up, storage racks/boxes, remote alarm system



Application

Labocon Cryogenic Chest type Freezer LCCF-164-100 Series is ideal in comparison to liquid nitrogen storage as they avoid cross contamination across liquid phases from sample to sample. They can be used to preserve stem cells and in environment & stress testing.

Specification

Model		LCCF-164-101
Capacity (L)		128 L
Temp. range		-110°C to -164°C
Dimension (W x D x H) (mm)	Overall	890x2005x1009
	Internal	410x1140x552
Power		3600 W
Power Supply		
Weight (Net/Gross)		230/250 kg
Catalog no.		9428177343

Specification

Model no.	Accessory	Catalog no.
LCBS-01	1 CO2 Backup System	9428178343
LRA-01	Storage Racks	9428179343
LBX-01	Boxes	9428180343

UPRIGHT FREEZER DOUBLE DOOR LUFD-25-100 SERIES

Labocon Upright Freezer Double Door LUFD-25-100 Series are ergonomically designed, for safe and economic storage. They achieve outstanding thermal performance, safety, security and provide ultimate protection for many critical samples.

Features

- ▶ Vertical cabinet with two chamber rooms
- ▶ ABS liner interior and painted steel board exterior
- ▶ Door with safety lock and rotatable sure-grip door handle
- ▶ Insulation thickness: 60 mm
- ▶ Polycarbonate insulated inner doors
- ▶ LCD display
- ▶ Microprocessor temperature controller
- ▶ Password protected configuration page
- ▶ Refrigerant: CFC free R134a
- ▶ Danfoss compressor (2 units) and EBM fan motor
- ▶ 4 units Caster for easy handing
- ▶ 12 units drawers made of ABS material inside
- ▶ Safety functions: High or low temperature alarm, system failure alarm
- ▶ Optional: Chart Recorder

Application

Labocon Upright Freezer Double Door LUFD-25-100 Series are suitable for storage of number of samples like plasma and test samples to biologicals, storage of life-saving and frozen blood supplies and vaccines, enzymes for genetic research, temperature sensitive materials, reagents and other media.

Specification

Model	LUFD-25-101
Capacity (L)	450 L
Temp. range	-10°C to -25°C
Overall Dimension (W x D x H) (mm)	655x780x1845
Weight (kg)	120/140 kg
Power supply	220V/50Hz
Catalog no.	9428214343



LUFD-25⁰c - 105

UPRIGHT FREEZER DOUBLE DOOR LUFD-25-200 SERIES

Labocon Upright Freezer Double Door LUFD-25-200 Series are ergonomically designed, for safe and economic storage. They achieve outstanding thermal performance, safety, security and provide ultimate protection for many critical samples.

Features

- ▶ Sheet steel epoxy coated white colour inside and outside
- ▶ Internal corners are rounded to make easy any cleaning operation
- ▶ High density (40 Kg/m³) polyurethane insulation
- ▶ Insulation thickness: 50 mm
- ▶ Hinged door side-by-side provided with removable magnetic rubber gasket and flush-fitting type door handle. The door is also fitted with a spring loaded automatic closing device for openings inferior then 90° and special door switches that stop the internal ventilation at the door opening and light the internal lighting at every opening
- ▶ 6/9 (3 for each door) storage open wire shelves realized in sheet steel with a strong plastic coating
- ▶ Internal lighting: 2 bulb mounted in the bottom part of the control panel with automatic activation at every door opening and even through a touchpad on the control panel
- ▶ Control panel: microprocessor operating with 6 soft-touchpads and LCD display. The main functions of the control panel are :
 - ▶ Digital temperature adjusting and display with an accuracy of 0.1°C
 - ▶ Keyboard buttons with locking protection
 - ▶ Muting facilities for acoustic alarms
 - ▶ Alarms memory for the last 10 alarm conditions
 - ▶ Ntc type sensors for a high accuracy of the temperature control
- ▶ Cooling unit mounted at the top with a condensing unit compounded by a hermetic compressor and air cooled condenser
- ▶ Refrigeration: forced-air circulation

- ▶ Refrigerant : R404a CFC-free
- ▶ Defrosting: completely automatic, thermostat controlled. The condensate water is automatically channeled into an heated tray, located in the motor compartment, for the automatic evaporation of the condensate water
- ▶ Plug : Schuko type
- ▶ Breakers : 2 glass cartridge fuses with a rating of 10A, at protection of the appliance
- ▶ Noise level (dB(A)) : ≤ 54
- ▶ Safety functions: Visual and acoustic alarm signalling (with automatic resetting) for high and low temperature with limits programmable from the user, door ajar, delayed to allow the standard operations, power failure, anti-freezing evaporator, sensors failure. NO/NC contact to remote the
- ▶ alarm signals
- ▶ Optional:
 - ▶ Extra wire shelf
 - ▶ Stainless steel drawer
 - ▶ Plastic partitions for drawers
 - ▶ Front top for drawers
 - ▶ Kit of castors
 - ▶ Safety door lock with key
 - ▶ Temperature chart recorder
 - ▶ Electronic temperature printer
 - ▶ Internal electrical socket
 - ▶ Different voltage



Application

Labocon Upright Freezer Double Door LUFD-25-200 Series are suitable for storage of number of samples like plasma and test samples to biologicals, storage of life-saving and frozen blood supplies and vaccines, enzymes for genetic research, temperature sensitive materials, reagents and other media.

Specification

Model	LUFD-25-201	LUFD-25-202	LUFD-25-203	LUFD-25-204
Capacity (L)	925 L	1160 L	1365 L	2100 L
Temp. range	adjustable between -5°C to -20°C/25°C			
Shelves	6	6	6	9
Shelf loading capability (Kg)	30			
Shelf dimensions (W x D mm)	460 x 570			
Temperature Sensor	Ntc type			
Interface	RS 485			
Overall Dimension (W x D x H) (mm)	1200X700X1920	1500X700X2100	1500X820X2100	2250X820X2100
Weight (kg)	210/240 kg	235/265 kg	255/285 kg	375/415 kg
Power supply	220V/50Hz			
Catalog no.	9428215181	9428216181	9428217181	9428219181

UPRIGHT FREEZER DOUBLE DOOR LUFD-30-300 SERIES

Labocon Upright Freezer Double Door LUFD-30-300 Series are ergonomically designed, for safe and economic storage. They achieve outstanding thermal performance, safety, security and provide ultimate protection for many critical samples.

Features

- ▶ Sheet steel epoxy coated white colour inside and outside
- ▶ Internal corners are rounded to make easy any cleaning operation
- ▶ High density (40 Kg/m³) polyurethane insulation
- ▶ Insulation thickness: 50-75 mm
- ▶ Hinged door side-by-side provided with removable magnetic rubber gasket and flush-fitting type door handle. The door is also fitted with a spring loaded automatic closing device for openings inferior then 90° and special door switches that stop the internal ventilation at the door opening and light the internal lighting at every opening
- ▶ 6 (3 for each door) storage open wire shelves realized in sheet steel with a strong plastic coating
- ▶ Internal lighting: 2 bulb mounted in the bottom part of the control panel with automatic activation at every door opening through a special switch
- ▶ Control panel: microprocessor operating with soft-touchpads and LCD display. The main functions of the control panel are :
 - ▶ Digital temperature adjusting and display with an accuracy of 0.5°C
 - ▶ Keyboard password protected with automatic locking
 - ▶ Back-up battery, with automatic recharging, granting till 48 hours autonomy for the control panel functioning in case of power failure
 - ▶ Muting facilities for the acoustic alarms
 - ▶ Test facilities for both battery charging status and alarm limits
 - ▶ Alarms memory (not deletable) for the last 30 alarm conditions,
 - ▶ Icon based menu
 - ▶ Real-time graphical temperature chart

- ▶ Data-logging function through USB port with direct download of Excel file)
- ▶ GSM/GPRS telephone dialer
- ▶ Events memory with the possibility of checking from the display, defrostings, door openings, relays status, etc.
- ▶ Pt1000 sensors for a better accuracy of the temperature control
- ▶ Internal ventilation setting
- ▶ Cooling unit mounted at the top with a condensing unit compounded by a hermetic compressor and air cooled condenser
- ▶ Refrigeration: forced-air circulation
- ▶ Refrigerant : CFC-free
- ▶ Defrosting: completely automatic, thermostat controlled. The condensate water is automatically channelled into an heated tray, located in the motor compartment, for the automatic evaporation of the condensate water
- ▶ Plug : Schuko type
- ▶ Breakers : 2 glass cartridge fuses with a rating of 10A, at protection of the appliance
- ▶ Noise level (dB(A)) : ≤ 58
- ▶ Safety functions: Visual and acoustic alarm signaling (with automatic resetting) for high and low temperature with limits programmable from the user, door ajar, delayed to allow the standard operations, power failure, anti-freezing evaporator, sensors failure. NO/NC contact to remote the alarm signals
- ▶ Optional:
 - ▶ Extra wire shelf
 - ▶ Stainless steel drawer
 - ▶ Plastic partitions for drawers
 - ▶ Front top for drawers
 - ▶ Kit of castors
 - ▶ Safety door lock with key
 - ▶ Temperature chart recorder
 - ▶ Electronic temperature printer
 - ▶ Data logger function with USB port
 - ▶ Ballasted sensor for simulation of product temperature alarm
 - ▶ Different voltage



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Application

Labocon Upright Freezer Double Door LUFD-30-300 Series are suitable for storage of number of samples like plasma and test samples to biologicals, storage of life-saving and frozen blood supplies and vaccines, enzymes for genetic research, temperature sensitive materials, reagents and other media.

Specification

Model	LUFD-30-301	LUFD-30-302	LUFD-30-303
Capacity (L)	925 L	1160 L	1365 L
Temp. range	adjustable between -15°C / -30°C		
Shelves	6		
Shelf loading capability (Kg)	30		
Shelf dimensions (W x D mm)	460 x 57		
Temperature Sensor	0		
Interface	Pt1000		
Overall Dimension (W x D x H) (mm)	1200X740X1920	1500X740X2100	1500X860X2100
Weight (kg)	220/250 kg	250/280 kg	270/300 kg
Power supply	220V/50Hz		
Catalog no.	9428220181	9428221181	9428222181

UPRIGHT FREEZER DOUBLE DOOR LUFD-40-400 SERIES

Labocon Upright Freezer Double Door LUFD-40-400 Series are ergonomically designed, for safe and economic storage. They achieve outstanding thermal performance, safety, security and provide ultimate protection for many critical samples.

Features

- ▶ Exterior made of painted steel board and interior of high quality stainless steel
- ▶ Double sealing door with lock and 2 units door handle
- ▶ Upper/down room with 2 units adjustable shelves each, total 6 chambers with inner door
- ▶ LCD display
- ▶ Microprocessor temperature controller
- ▶ Refrigerant: CFC free R507
- ▶ Danfoss compressor (2 units) and EBM fan motor
- ▶ Unique refrigeration circulation technology
- ▶ 4 units Casters for easy handling
- ▶ Password protected configuration page
- ▶ Safety functions: audio/ visual alarm function for high or low temperature and system failure

Application

Labocon Upright Freezer Double Door LUFD-40-400 Series are suitable for storage of number of samples like plasma and test samples to biologicals, storage of life-saving and frozen blood supplies and vaccines, enzymes for genetic research, temperature sensitive materials, reagents and other media.

Specification

Model	LUFD-40-401	LUFD-40-402
Capacity (L)	208 L	525 L
Temp. range	-25°C to -40°C	-10°C to -40°C
Overall Dimension (W x D x H) (mm)	623x604x1715	880x855x1912
Weight (kg)	90/95 kg	-
Power supply	220V/50Hz	
Catalog no.	9428223343	9428224105

UPRIGHT FREEZER DOUBLE DOOR LUFD-86-500 SERIES

Labocon Upright Freezer Double Door LUFD-86-500 Series are ergonomically designed, for safe and economic storage. They achieve outstanding thermal performance, safety, security and provide ultimate protection for many critical samples.

Features

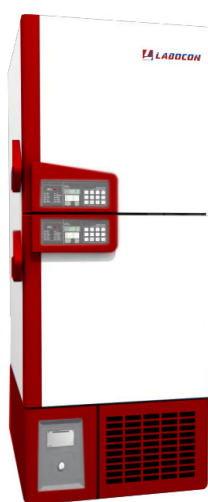
- ▶ Stainless steel interior and painted steel board exterior
- ▶ Front lockable door design with full height handle and vacuum release port
- ▶ Two-times foaming technology with double silicon gasket seal
- ▶ Adjustable 1 stainless steel shelves with inner door for each room
- ▶ Insulation thickness: 130 mm
- ▶ Polycarbonate insulated inner doors
- ▶ Digital temperature display
- ▶ Double microprocessor-based temperature controller
- ▶ Danfoss compressor (2 units) and EBM fan electromotor
- ▶ Double cooling system to support different rooms separately and independently
- ▶ Mixed Refrigerant: CFC Free R134a, R404a, R23, R410A, N2
- ▶ Temperature printer which record 7 days data
- ▶ 72 hours battery backup for printer and controller display
- ▶ Keyboard lock and password protected configuration page
- ▶ 4 units casters for easy handling
- ▶ Safety functions: audible and visual alarm for high or low temperature, power failure, low battery, door open, filter blocking, system failure
- ▶ Optional: Chart recorder, CO2 back up system, storage racks/boxes, remote alarm system

Application

Labocon Upright Freezer Double Door LUFD-86-500 Series are suitable for storage of number of samples like plasma and test samples to biologicals, storage of life-saving and frozen blood supplies and vaccines, enzymes for genetic research, temperature sensitive materials, reagents and other media.

Specification

Model	LUFD-86-501
Capacity (L)	508 L
Temp. range	-10°C to -86°C
Overall Dimension (W x D x H) (mm)	1200x882x2011
Weight (kg)	320/340 kg
Power supply	220V/50Hz
Catalog no.	9428225343



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SOLAR FREEZER LSF-18-100 SERIES

Labocon Solar Freezers LSF-18-100 Series are energy efficient freezers with fully hermetic Domus compressor and integrated electronic controls. The unit can handle abrasive conditions with quiet and smooth operation.

Features

- ▶ Single top door with lock
- ▶ Equipped with drawers
- ▶ High temperature resistance design
- ▶ Automatically turns off when low input voltage
- ▶ Digital temperature display
- ▶ Refrigerant: CFC free R134a
- ▶ Suitable for AC/DC applications through an AC/DC adaptor

Application

It is widely used in life science research, medical, food and beverage industries as a remote storage system. The solar freezer can freeze products and is perfect for ice making.

Specification

Model	LSF-18-101	LSF-18-102	LSF-18-103
Capacity	68 L	100 L	150 L
Temp. Range	-18°C to 30°C		
Overall Dimension (LxWxH)	535x535x770 mm	535x535x845 mm	738x535x845 mm
Weight (Net/Gross)	25/28 kg	30/33 kg	35/38 kg
Power	52 W	65 W	75 W
Power Supply	DC 12V/24V		
Catalog No.	9423101343	9423102343	9423103343

Model	LSF-18-104	LSF-18-105	LSF-18-106
Capacity	200 L	268 L	358 L
Temp. Range	-18°C to 30°C		
Overall Dimension (LxWxH)	870x535x845 mm	1072x535x845 mm	1290x598x850 mm
Weight (Net/Gross)	42/45 kg	48/51 kg	48/51 kg
Power	87 W	100 W	120 W
Power Supply	DC 12V/24V		
Catalog No.	9423104343	9423105343	9423106343


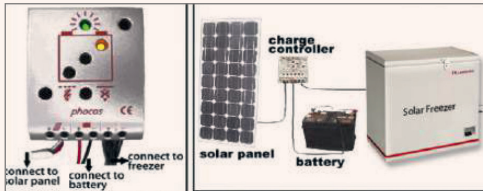

Optional Accessories

Model	LSF-18-101
LSF-18-100 Series	Charge controller
	AC/DC automatic switch
	Compressor
	Controller of compressor
	Thermostat
	Cable with clips
	Fan
	Control panel for compressor
	Bulb
	Basket
	AC/DC adaptor, 110V-240V to 24V/6A
	AC/DC adaptor, 220V-240V to 12V/12.5A
	AC/DC adaptor, 110V-130V to 12V/12.5A
LSF-18-101 and LSF-18-102	Solar panel of 120 W
	Battery of 100 Ah
LSF-18-103	Solar panel of 160 W
	Battery of 120Ah
LSF-18-104	Solar panel of 180 W
	Battery of 150 Ah
LSF-18-105 and LSF-18-106	Solar panel of 200 W
	Battery of 150 Ah

Principle

The solar panel converts sunlight into DC power or electricity to charge battery. This electricity is controlled via a solar controller which ensures that battery is charged properly and not damaged and that power is not lost / discharged. DC appliances can then be powered directly from the battery.

Operational Methods

Method 1	<p>Accessory: AC/DC adaptor</p> <p>This is the simplest method. The DC freezer can be powered by AC. It is used to directly put the AC/DC adaptor in the conventional 220V and then the freezer can work well without solar panels, battery and controller.</p>	 <p>solar freezer system(use method 1)</p>
Method 2	<p>Accessory: Solar panels, battery, controller</p> <p>The solar panel converts sunlight into DC power or electricity to charge battery. This electricity is controlled via a solar controller which ensures that battery is charged properly and is not damaged and that power is not lost / discharged. Solar freezer can then be powered directly from the battery.</p>	 <p>charge controller solar freezer system(use method 2)</p>
Method 3	<p>Accessory: Battery</p> <p>At night or during the rainy season when the weather is cloudy, the solar panel can't absorb the sunlight. The spare battery has enough electricity. This battery can be directly connected the solar freezer to power and then the solar freezer can work well. It is also used for operating car, boat, 4WD, motor house, caravan, truck, marine</p>	

Method 4

Accessory: Charge controller, solar panel, battery, AC/DC auto transfer switch, AC/DC adaptor

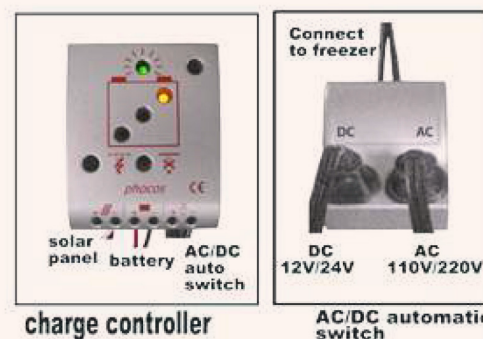
Combine Method#1 and Method#2

Add a AC/DC auto transfer switch, when solar panel can't provide electricity. The auto transfer switch can automatically switch to AC electricity (110v/220v) and when the solar panel can provide electricity, it will go back to DC solar power (12v/24v)



AC/DC automatic switch


The power supply is preferential on the position 1, it means if customer plugs into position 1 with the cord of solar power source and plug into position 2 with the cord of mains electricity AC 220/110V, the solar power source is the preferential power supply for the DC freezer. On the other hand, mains electricity becomes the preferential power supply.





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