



# Blood Banking

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# Touch Screen Blood Collection Mixer

Model 302000

**Boekel Scientific's Touch Screen Blood Collection Mixer** was designed in conjunction with stationary and mobile blood collection experts. The unit incorporates the functionality needed for the busiest donor stations with new-to-the-industry features to improve efficiency and operation ease. The unit has an easily viewable, bright color touch screen that displays the collection data in real time. The most important collection details such as current volume, target volume, percent full, elapsed collection time and estimated time remaining are displayed during operation. The unit also has a large active pictorial that visually represents the blood collection bag, so the clinician can observe the progress from a distance while tending to other donors. The blood collection mixer also has a highly accurate scale, removable long-life battery pack, USB and Ethernet data ports. The system has an integrated handle, removable magnetically attached mixing tray, and a lightweight robust design for easy relocation at mobile donor centers. The system alarms include low flow warning, end of cycle and low battery.

- Bright and Large Color Touch Screen with Easily Recognizable Icons
- Highly Accurate Scale with Removeable Magnetically Attached Tray
- Displays current volume, target volume, elapsed collection time, and estimated time remaining
- USB, Ethernet and Barcode Scanner Communication Enabled
- Long-life Rechargeable Battery for use without Power
- Lightweight and Robust Design with Built-in Carry Handles
- Ideal for Mobile and Fixed Blood Collection Stations

## Accessories



Extra Long Life Battery  
Part Number: 902-1137



4 Bank Battery Charger  
Part Number: 302025



Blood Mixer Carry Case  
Part Number: 302CASE

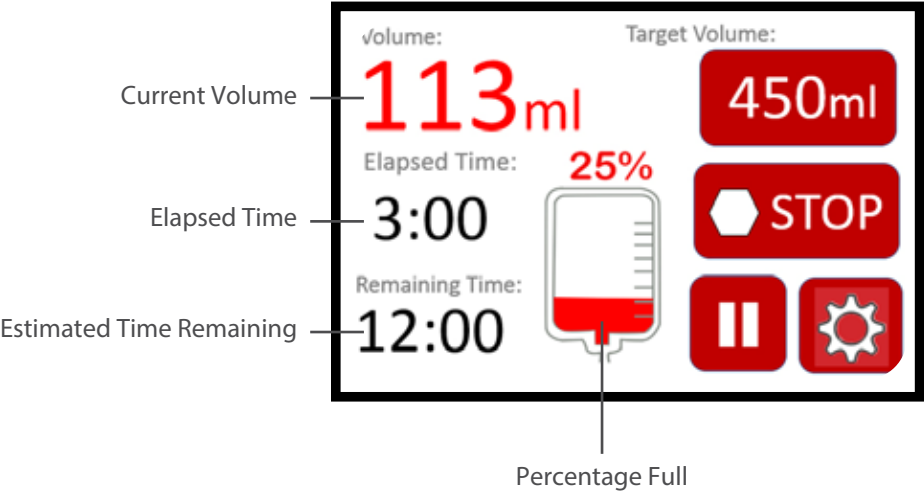
# Touch Screen Blood Collection Mixer

Model 302000



Bag capacity settings	Default volume setting: 450ml Adjustable preset volumes: 400ml, 450ml, 500ml, 550ml
Tray type	Easy on/off magnetically attached with multiple tubing guides
Scale performance	High accuracy load cell +/- 1.0 gram with user friendly calibration
Mixing action	3 cycles of +/- 12 degree rocking / off for 2 seconds / repeat
Alarms	Low flow rate, scale alarm, motor alarm, end of cycle, battery alarm
Power	18V, 1.67A via 100-240V - 50/60 Hz 0.8A AC power supply (UL/CSA)

Vivid Color Touch Screen That Can Easily Be Viewed From Across The Room



# Platelet Agitators & Incubators

Models 301550 / 301200, 301650 / 301300, FS100

**Boekel Scientific offers three sizes** of Platelet Storage Systems for use in hospital blood banks and blood centers. These medical devices are specifically designed to support the storage needs of blood platelets for human therapeutic use; based on the AABB (American Association for Blood Banks) recommendations and the devices are AABB standards compliant approved. The Small Platelet Storage System has a removable agitator with 6 shelves. The Large Platelet Storage System has a removable agitator with 8 shelves. The FS100 is a high capacity Platelet Storage System with an integrated agitation system with 25 shelves. All systems have easy glide removable storage shelves. They all use a gas-less, compressorless solid state heating/cooling mechanism that is efficient and reliable. The incubators also has a patented inventory management system to help manage platelet expiration, among other revolutionary features.

- Small, Large and Floor Standing Models
- Large Color Touch Screen with Advanced Features
- USB and Ethernet data access
- Thermal Printer for Temperature Reportig



Inkless printer for documenting temperature control



Touch Screen Control System



Small Platelet Incubator / Agitator  
PN: 301550 / 301200



Large Platelet Incubator / Agitator  
PN: 301650 / 301300



Floor Standing High Capacity  
Platelet Incubator & Agitator

## Small Platelet Agitator & Incubator

Models 301550 / 301200

**The Small Platelet Incubatora and Agitator features** an independent agitator and incubator for installations that do not require the use of a platelet incubator for temperature control. The agitator has 6 removeable shelves for the storage of platelets. The system is ideal for small hospitals or remote hospital locations that require platelet storage.

### Small Platelet Incubator Model 301550

Capacity	One 301200 Agitator
Default temperature	Setpoint 22° C
Dimensions (WxLxH)	21.25" x 19.75" x 26"
Electrical	115V, 60Hz, 50 Watts (UL/CSA/CE)

#### Features:

- Certified to 60601-1 UL and CSA Medical Equipment Standards
- Onboard inkless printer for documenting temperature control
- Multitude of system alarms to protect the quality of platelets
- Heating and cooling without refrigerant or a compressor
- Large 7" industrial touch screen with intuitive icons
- Two year warranty & extended warranty available
- Patented Inventory Management System
- Battery backup in the event of a power failure
- Downloadable event and temperature log
- LED incubator lighting

### Platelet Agitator Model 301200

Capacity	6 shelves
Dimensions (WxLxH)	15.75" x 11.25" x 13.625"
Electrical	115V, 60Hz, 50 Watts (UL/CSA/CE)



# Large Platelet Agitator & Incubator

Models 301650 / 301300

The **Large Platelet Incubator and Agitator** has an independent agitation system that can be operated with or without the platelet incubator. The incubator has 8 easy glide removeable shelves and has a smooth shaking operation. The incubator has the same advanced controls and a thermoelectric heating and cooling system as the Small and Floor Standing units for standardization.

**Large Platelet Incubator Model 301650**

Capacity	One 301300 Agitator
Default temperature	Setpoint 22° C
Dimensions (WxLxH)	25.3" x 26.5" x 30.0"
Electrical	115V, 50/60Hz (UL/CSA/CE)

**Features:**

- Patent pending Inventory Management System to decrease wastage
- Gas-less/Compressor-less heating and cooling design
- Onboard thermal printer for keeping records of temperature data
- Downloadable event log through USB
- Massive 7" industrial touch screen with intuitive icons
- Battery backup in the event of a power failure
- Two year Warranty with an extended warranty available
- Removable shelves with smooth platform designed to reduce label sticking

**Platelet Agitator Model 301300**

Capacity	8 shelves
Dimensions (WxLxH)	18.5" x 16.5" x 17.5"
Electrical	115V, 50/60Hz (UL/CSA/CE)



# Floor Standing Platelet Incubator / Agitator

Model FS100

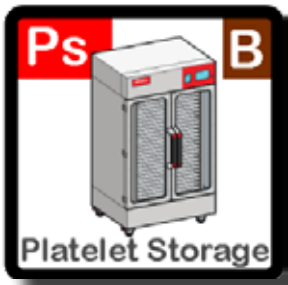
The **FS1100, Floor Standing High Capacity Platelet Incubator and Agitator**, has an integrated agitation system with 25 easy sliding shelves. The shelves are removeable and the unit can hold up to 100 units of platelets. The system has a highly efficient heating and system by using thermoelectric technology. The unit also has an indicator light that is lighted during operation and flashing in an alarm state. The unit also has locking casters so it can easily be rolled into the required location.

**Floor Standing Platelet Incubator & Agitator Model FS100 &FS100-2**

Model number	FS100 for 115V and FS100-2 for 230V
Capacity	100 Apheresis units
Shelf details	25 removable agitator shelves
Heating/cooling	Dual thermoelectric heating and cooling
Dimensions (WxLxH)	40.0" x 27.64" x 69.9"
Electrical	115V, 1 phase, 50/60Hz, 230V, 1 phase, 50/60Hz

**Features:**

- Store up to 100 units of platelets
- Patented Inventory Management System
- No refrigerant or compressor for worry-free efficient heating and cooling
- Onboard thermal printer for printing temperature data and event logs
- Downloadable log through USB and realtime monitoring via ethernet
- 7" Industrial touch screen with intuitive icons
- Battery backup for system log in the event of a power failure
- Two year warranty included
- On-Board Thermal Printer for quick and easy temperature record keeping
- Thermo-electric heated and cooled incubator eliminates the old compressor type design
- Downloadable event and temperature log
- LED incubator lighting



# Plasma Thawer

Model 301000

**The Boekel Scientific Plasma Thawer** is designed for use in blood banks and laboratories for the thawing of up to four units of Fresh Frozen Plasma (FFP), Cryoprecipitated AHF, or Plasma Frozen Within 24 Hours After Phlebotomy (PF24) for future infusion into a patient. It offers both controlled temperature and agitation to thaw various volumes of plasma via two independently controlled baskets that accommodate up to two plasma bags per basket. The microprocessor-controlled system offers rapid temperature recovery and optimal temperature stability to reduce the time required to thaw multiple bags. The easy-to-program user interface allows multiple time options for thawing various sized bags. Upon completion of a timed cycle the baskets will automatically raise from the bath. Advanced safety features notify the user of an unsafe condition and raise the baskets from the bath upon alarm activation. The unit is AABB standars compliant and has a two year warranty.

- Two independently Controlled Arms with 4 Baskets
- Stainless-steel Corrosion Resistant Construction
- AABB Standards Compliance Approved
- Easy to use controls for rapid defrosting of plasma
- Built-in drain with quick connect drain hosing

## Accessories and Part Numbers

Overwrap protection  
C1905712

Chamber cover  
D1905565

Antimicrobial bath cleaner  
B1906001



Plasma Thawer without controlled baskets



Two controlled baskets included with Plasma Thawer

# Plasma Thawer

Model 301000

## Plasma Thawer Model 301000

Temperature accuracy	+/- 0.3°C
Chamber volume	17.98 L (4.75 gal)
Chamber dimensions (WxLxH)	15.5" x 11" x 7.5"
Electrical	120V, 50/60Hz, 7A, 900W (UL/CSA/CE)

### Features:

- Microprocessor based temperature controller with audible and visual high temperature alarm
- Two Basket design to accommodate up to 4 bags of plasma
- Baskets designed to keep plasma bags submerged during the thawing cycle
- Independently controlled basket assemblies agitate plasma units in 36.0° C water bath to efficiently and safely thaw plasma
- Cycles can be interrupted to check units or add additional bags
- Cycle times settable from 0-60 minutes or Hold which enables the end user to control the thawing time
- Polished stainless steel tank and baskets
- Bacteria Resistant Powder Coated exterior
- Chamber volume and high capacity heater enhance heat transfer efficiencies for fast thawing times
- Convenient drain port with quick-connect attachment allows for easy draining and cleaning of the bath
- Large chamber opening for easy cleaning
- Two Year Manufacturers Warranty
- Certified to 60601-1 UL and CSA Medical Equipment Standards
- FDA Cleared Device



Plasma Thawer works with a single or multiple controlled baskets



Plasma Thawer with chamber cover D1905565



# Blood Tube Rockers

Models 282000, 280150, 260450

**Boekel Scientific has a long history** of manufacturing devices for shaking, rocking, and rotating samples. The Boekel Blood Tube rockers are designed for continuous use and are available in two sizes. Variable speed models allow for the adjustment of the rocking speed. All units are supplied with a removable rubber mat to ensure samples stay in place while rocking.

Tube Rocker XL Variable Speed Model 282000	
Speed	5-25 rpm
Tilt angle	35° fixed
Tube capacity	Up to 19 tubes maximum 120 mm long
Load capacity	2.8 lbs. / 1.3 kgs.
Dimensions (WxLxH)	16" x 4.7" x 5"
Power	12 VDC, 0.5A via 100/240 V AC adapter
Shipping weight	8 lbs. / 3.6 kgs.

Tube Rocker Mini Variable Speed Model 280150	
Speed	5-25 rpm
Tilt angle	35° fixed
Tube capacity	Up to 8 tubes maximum 120 mm long
Load capacity	1.8 lbs. / 0.8 kgs.
Dimensions (WxLxH)	8.6" x 4.7" x 5"
Power	12 VDC, 0.5A via 100/240 V AC adapter
Shipping weight	5 lbs. / 2.26 kgs.

Tube Rocker Mini Fixed Speed Model 260450	
Speed	5-25 rpm
Tilt angle	35° fixed
Tube capacity	Up to 8 tubes maximum 120 mm long
Load capacity	1.8 lbs. / 0.8 kgs.
Dimensions (WxLxH)	8.6" x 4.7" x 5"
Power	12 VDC, 0.5A via 100/240 V AC adapter
Shipping weight	5 lbs. / 2.26 kgs.

- Features:**
- Provides gentle rocking action for mixing of specimens
  - Low profile and small footprint minimizes bench space
  - Fixed tilt angle - 35°
  - Supplied with non-slip autoclavable tube pad (silicon rubber)
  - Power pack is CSA, CE and PSE approved



# Mini Tube Vortex Mixer

Models 270100

**The Boekel Scientific Mini Tube Vortex Mixer** is compact, simple lab vortex mixer with a low profile and small footprint. Ideal for mixing centrifuge tubes, culture tubes, blood tubes, and test tubes. The unit has a pressure sensitive cup for touch activated operation or the unit can run in continuous mode. The suction cup feet prevent the unit from moving during operation.

Mini Tube Vortex Mixer Model 2701000	
Speed	300 to 6000 rpm / continuous or burst
Orbit	2mm
Tube diameter (maximum)	20mm
Operating temperature	+4°C to +40°C
Dimensions (WxLxH)	4.13" x 5.9" x 3.35" (10.5cm x 15cm x 8.5cm)
Power	12V DC, 0.5A via 115/230 VAC adapter
Shipping weight	4 lbs. / 1.8 kgs.

- Features:**
- Compact, with low profile and small footprint
  - Pressure sensitive cup
  - Continuous or touch operation
  - Rubber suction pads prevent walking, absorb vibration
  - Low voltage supply for safe cold room use
  - Power pac is UL, CSA and CE approved
  - Unit is CE marked





# Programmable Heating Blocks

Models 115001, 115001-2, 115002, 115002-2, 115004, 115004-2

The **Programmable Heating Blocks** are designed for precise controlling of sample temperatures. Heating Blocks, also known as dry bath incubators, use aluminum inserts to suit the use of many types of laboratory test tubes, plates, and containers. The Programmable Heating Blocks use an advanced touch screen control system to create and store programs. Programs can have a maximum of five different temperature steps and there is a repeat function for thermal cycling procedures.

**One Block Capacity Touch Screen Models 115001 and 115001-2**

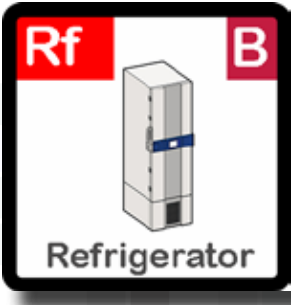
Temperature range	Ambient +5°C to 120°C with overtemp protection
Temperature stability	+/- 0.2°C from 37° to 100°C
Temperature accuracy	+/- 0.25°C at 37°C
Operating temperature	10°C to 30°C
Electrical	115001: 115V, 50/60Hz (UL/CSA) 115001-2: 230V, 50/60Hz (CE)

**Two Block Capacity Touch Screen Models 115002 and 115002-2**

Temperature range	Ambient +5°C to 120°C with overtemp protection
Temperature stability	+/- 0.2°C from 37° to 100°C
Temperature accuracy	+/- 0.25°C at 37°C
Operating temperature	10°C to 30°C
Electrical	115002: 115V, 50/60Hz (UL/CSA) 115002-2: 230V, 50/60Hz (CE)

**Four Block Capacity Touch Screen Models 115004 and 115004-2**

Temperature range	Ambient +5°C to 120°C with overtemp protection
Temperature stability	+/- 0.2°C from 37° to 100°C
Temperature accuracy	+/- 0.25°C at 37°C
Operating temperature	10°C to 30°C
Electrical	115002: 115V, 50/60Hz (UL/CSA) 115002-2: 230V, 50/60Hz (CE)



# Programmable Heating Blocks

Models 115001, 115001-2, 115002, 115002-2, 115004, 115004-2

**Boekel programmable heating blocks** are designed to be used with standard aluminum dry blocks (nominally 3" deep x 3 ¾" wide x 2" high) of varying configurations for heating test tubes, microtubes, and other small vessels.

**Features:**

- Readily Recognizable Icons to Start, Stop and Pause Temperature Control on a Bright Color Touch Screen
- Save up to 25 Programs for Rapid Sample Processing
- One, Two and Four Block Models to Fit Your Workflow
- Slim Design to Conserve Bench Space
- Optional External Temperature Probe
- Amazing Price Point
- 2 Year Warranty



Part Number	Capacity	Tube Type
110006	35	6mm tubes
110010	20	10mm tubes
110013	20	13mm tubes
110016	12	16mm tubes
110020	6	20mm tubes
110025	6	25mm tubes
110035	3	25mm tubes
110035	5	13mm tubes
110035	6	6mm tubes

Part Number	Capacity	Tube Type
110040	24	1.5ml tubes
110045	24	0.5ml tubes
110048	48	0.2ml tubes
110051	1	96 well microplate
110096	6	96 well 0.2ml microplate
		0.2ml per strips/tubes
110096	24	1.5ml "Dolphin" tubes
110101	12	5ml centrifuge tubes

Part Number	Capacity	Tube Type
110102	12	15ml centrifuge tubes
110103	5	50ml centrifuge tubes



Heating Block also compattible with Armor Beads



An option external temperature probe is available for spot temperature checking and controlling the unit temperature.

Boekel Scientific Dry Bath Incubator Temperature Probe

# B Medical Blood Bank Refrigerators

Precision Line (1.8 - 12.8 CuFt), Models B51, B131, B291, B381, B261  
Premium Line (12.8 - 31.6 CuFt), Models B401, B501, B701, B901

**Boekel Scientific proudly supplies B Medical** Blood Banking refrigeration and freezing equipment. B Medical Blood Bank Refrigerators are designed specifically for storage of blood or blood components and are available in two lines. The Precision line ranges in size from 1.8 to 12.8 CuFt. and the Premium line ranges in size from 12.8 to 31.6 CuFt.

The B Medical Precision Line of Blood Bank Refrigerators are Under Counter, Tabletop, Combination Refrigerators/Plasma Freezers and Upright Refrigerators designed for safe storage of whole blood and blood components at temperature ranging from +2°C to +6°C. The system sizes range from 1.8 CuFt to 12.8 CuFt. The Precision Line features a digital display and control system, locking doors, power indicator, internal LED light, and a controlled fan cooling system for constant and even temperature throughout the chamber. This ergonomically designed line of refrigerators offers a lifetime warranty that the chamber remains corrosion-free.



## Precision Line



Blood Bank Refrigerator Model	B51 US	B131 US	B291 US	B381 US
Gross / Net volume (cu ft)	1.8 / 1.6	4.3 / 3.7	10.5 / 9.5	12.8 / 11.6
Gross / Net volume (l)	52 / 45	121 / 106	297 / 269	362 / 329
Storage capacity	24 (450ml)	51 (450ml)	159 (450ml)	213 (450ml)
(blood bags gross volume)	31 (350ml)	79 (350ml)	235 (350ml)	313 (350ml)
Set temperature (preset)	+4°C	+4°C	+4°C	+4°C
Temperature cold / warm alarm limit	+2°C / +6°C	+2°C / +6°C	+2°C / +6°C	+2°C / +6°C
Hold over time (+4°C to +10°C)	2.5 h (+4°C to +10°C)	2.7 h (+4°C to +10°C)	2.2 h (+4°C to +10°C)	1.9 h (+4°C to +10°C)
Climate class (ambient temperature range)	SN (+10°C to +32°C)	SN (+10°C to +32°C)	SN (+10°C to +32°C)	SN (+10°C to +32°C)
Defrosting technique	Natural	Natural	Natural	Natural
Refrigerant type	R600a	R600a	R600a	R600a
External dimensions H x W x D (in)	26.4 x 19.5 x 22.6	32.7 x 23.4 x 27.4	65.8 x 23.4 x 27.4	78.0 x 23.4 x 27.4
External dimensions H x W x D (mm)	670 x 495 x 575	830 x 595 x 695	1670 x 595 X 695	1980 x 595 x 695
Inner dimensions H x W x D (in)	18.5 x 14.8 x 13.8	24.8 x 18.7 x 18.5	57.9 x 18.7 x 18.5	70.5 x 18.7 x 18.5
Inner dimensions H x W x D (mm)	470 x 375 x 350	630 x 475 x 470	1470 x 475 x 470	1790 x 475 x 470
Weight (lbs)	84	126	212	240
Supply voltage (V)	115	115	115	115
Frequency (Hz)	60	60	60	60
Power (W)	100	200	200	200
Energy consumption (kWh/24h)	0.5	0.68	0.99	1.06
Heat emission (Kcal/h)	12	24	34	34
Compressor running time (%)	30	34	46	42
Noise level (dB(A))	37	38	39	38
(at 1m height & 1m distance)				

# B Medical Blood Bank Refrigerators

Precision Line (1.8 - 12.8 CuFt), Models B51, B131, B291, B381, B261  
Premium Line (12.8 - 31.6 CuFt), Models B401, B501, B701, B901

**The B Medical Premium Line** of Blood Bank Refrigerators are Upright Refrigerators designed for safe storage of whole blood and blood components at temperature ranging from +2°C to +6°C. The system sizes range from 15.9 CuFt to 31.6 CuFt. The Premium Line features a 7” touchscreen control system, key card locking doors, power indicator, internal LED light, alarms, and a controlled fan cooling system for constant and even temperature throughout the chamber. This ergonomically designed line of robust refrigerators is designed to meet the demanding requirements of the busiest blood banks.



## Premium Line

BF 261 US (Refrigerator/Freezer)	B401 US	B501 US	B701 US	B901 US
R 4.3 / 3.7	F 4.3 / 3.7	15.9 / 13.6	21.1 / 18.0	26.4 / 22.5
R 121 / 106	F 121 / 106	451 / 384	598 / 510	747 / 636
R 51 (450 ml)	F 64 (450 ml)	270 (450ml)	360 (450ml)	450 (450ml)
R 79 (350 ml)	F 104 (350 ml)	75 (350ml)	500 (350ml)	625 (350ml)
R +4°C	F -32°C	+4°C	+4°C	+4°C
R +2°C/+6°C	F -37°C / -27°C	+2.5°C / +5.5°C	+2.5°C / +5.5°C	+2.5°C / +5.5°C
R 2.7 h	F 0.7 h (-32°C / -23°C)	2.5 h (+4°C to +10°C)	2.5 h (+4°C to +10°C)	2.5 h (+4°C to +10°C)
SN (+10°C to +32°C)		SN / T (+10°C to +43°C)	SN / T (+10°C to +43°C)	SN / T (+10°C to +43°C)
R Natural	F Manual	Natural	Natural	Natural
		R600a	R600a	R600a
65.0 x 23.4 x 27.4		78.3 x 27.5 x 40.9	78.3 x 33.3 x 40.9	78.3 x 39.1 x 40.9
1650 x 595 x 695		1988 x 699 x 1039	1988 x 845 x 1039	1988 x 992 x 1039
R 24.8 x 18.7 x 18.5	F 24.8 x 18.7 x 18.5	46.0 x 17.6 x 28.1	46.0 x 23.2 x 28.1	46.0 x 29.1 x 28.1
R 630 x 475 x 470	F 630 x 475 x 470	1167 x 447 x 713	1167 x 590 x 713	1167 x 740 x 713
258		454	503	553
115		115	115	115
60		60	60	60
R 200	F 300	300	300	300
R 0.68	F 1.98	1.4	1.4	1.4
R 24	F 65	30	35	36
R 34	F 36	25	29	30
R 38	F 47	50	46	46

# Plasma Storage Freezers

Precision Line (4.3 CuFt), Model F131  
Premium Line (15.9 - 31.6 CuFt), Models F401, F501, F701, F901

**B Medical Plasma Storage Freezers** are available through Boekel Scientific. B Medical products are robust, economical, and manufactured in Luxembourg. Plasma Storage Freezers are available in two product lines based on size and features.

**The Precision line of Plasma Freezers** consist of a single undercounter model with a volume of 4.3 Cubic Feet. The unit has a temperature recorder, 1 bottom drawer, and 2 additional drawers with dividers. The system has a capacity of 104 Plasma Bags (350ml). This device is a Class II medical device and used for safe storage of frozen blood plasma or blood components at temperatures below -27°C. The Precision line is manufactured with a rotomolded interior that has a lifetime warranty. These units have an advanced digital control system.



## Premium Line

# Plasma Storage Freezers

Precision Line (4.3 CuFt), Model F131  
Premium Line (15.9 - 31.6 CuFt), Models F401, F501, F701, F901

**The Premium line of Plasma Freezers** are Class II medical devices for bulk storage of frozen blood plasma or blood components at temperatures below -27°C. The Premium line has a large 7” control system with the most advanced monitoring and control capabilities. The door is sealed with a robust and ergonomic door handle. The cooling system is efficient and offers better performance with less ice formation. These systems have an insulated inner door that increases efficiency and cooling loss. Store from 345 to 690 frozen plasma bags in the configurable interior. The interior is fabricated of high-quality stainless steel to ensure corrosion resistance.



## Premium Line

## Precision Line



Plasma Storage Freezers Model	F131		F401		
Gross / Net volume (cu ft)	4.3 / 3.7		15.9 / 13.6		
Storage capacity (plasma bags)	104 (350ml)	345 (350ml)			
Set temperature (preset)	-32°C		-41°C		
Set temperature (setting range)	-		-41°C to -32°C		
can be adjusted in steps of 0.1°C					
Preset cold / warm alarm limit	-37°C / -27°C		-46°C / -32°C		
Hold over time	0.7 h (-32°C to -23°C)		2.5 h (-41°C to -18°C)		
Climate class (ambient temperature range)	SN (+10°C to +32°C)		SN (+10°C to +32°C)		
Defrosting technique	Manual		Automatic (hot gas)		
Refrigerant type	R290		R290		
External dimensions H x W x D (in)	32.7 x 23.4 x 27.4		78.3 x 27.5 x 40.9		
Inner dimensions H x W x D (in)	24.8 x 18.7 x 18.5		53.9 x 17.6 x 28.1		
Net weight with standard equipment (lb)	128		608		
Supply voltage (V)	R 220-240	F 115-127	R 230	F 220	F115-127
Frequency (Hz)	R 50 / 60	F 60	R 50	F 60	F 60
Power (W)	R 300	F 360	R 1300	F 1300	F 1300
Energy consumption (kWh/24h)	R 1.35 / 1.28	F 1.98	R 5.4	F 6.1	F 4.9
Heat emission (Kcal/h)	R 53	F 65	R 193	F 219	F 176 2
Compressor running time (%)	R 37	F 36	R 50	F 43	F 40
Noise level (dB(A))	R 45 / 47	F 47	R 60	F 61	F 58
(at 1m height & 1m distance)					

F501			F701			F901		
21.1 / 18.0			26.4 / 22.5			31.6 / 26.9		
460 (350ml)			575 (350ml) 6			90 (350ml)		
41°C			-41°C					
-41°C to -32°C			-41°C to -32°C			-41°C to -32°C		
-46°C / -32°C			-46°C / -32°C			-46°C / -32°C		
3.0 h (-41°C to -18°C)			3.0 h (-41°C to -18°C)			3.2 h (-41°C to -18°C)		
SN (+10°C to +32°C)			SN (+10°C to +32°C)			SN (+10°C to +32°C)		
Automatic (hot gas)			Automatic (hot gas)			Automatic (hot gas)		
R290			R290			R290		
78.3 x 33.3 x 40.9			78.3 x 39.1 x 40.9			78.3 x 44.8 x 40.9		
53.9 x 23.2 x 28.1			53.9 x 29.1 x 28.1			53.9 x 34.9 x 28.1		
664			703			763		
R 230	F 220	F 15-127	R 230	R 220	F 115-127	R 230	F 220	F 115-127
R 50	F 60	F 60	R 50	R60	F 60	R 50	F 60	F 60
R 1300	F 1300	F 1300	R 1300	R 1300	R 1300	R 1300	F 1300	F 1300
R 6.6	F 5.4	F 5.2	R 7.4	F 5.7	F 5.3	R 6.8	F 6.1	F 7.6
R 236	F 192	F 186	R 265	F 205	F 190	R 244	F 219	F 272
R 42	F 40	F 43	R 50	F39	F 43	R 50	F 43	F 52
R 60	F 60	F 54	R 55	F 61	F 60	R 58	F 59	F 60

# Contact Shock Freezers

Models CSF61 L, CSF101 L

**B Medical Systems’ Contact Shock Freezers** are advanced rapid freezing devices designed for the most demanding installations. Quick and uniform freezing is essential for the optimal recovery of coagulation factors of fresh frozen plasma. B Medical Contac Shock Freezers provide the shortest freezing times on the market. Available in two sizes, these Class II(a) medical devices are AABB standards-compliant and have 40 years of medical refrigeration and 15 years of contact shock freezing behind them.

- Two advanced models available capable of single layer or double layer cooling
- Capable of freezing from 30 to 96 plasma bags
- Superior performance to compared to blast freezers
- Freeze times as low as 26 minutes
- Homogenous and energy efficient



Contact Shock Freezers Model		CSF61 L		CSF101 L		
Freezing capacity (plasma bags)	Single layer	20 at 1000ml (content 850ml) 30 at 350ml (content 250ml)		32 at 1000ml (content 850ml) 48 at 350ml (content 250ml)		
	Double layer	60 at 350ml (content 250ml)		96 at 350ml (content 250ml)		
Freezing time to core temperature of -30°C at +25°C ambient temperature (in single layer)		20 units (1000ml) ± 45 min. 30 units (350ml) ± 26 min.		32 units (1000ml) ± 51 min. 48 units (350ml) ± 26 min.		
Operating temperature (preset)	Pre-cooling	-40°C -		40°C		
	Freezing	-50°C		-50°C		
	Eco-mode	-43°C -		43°C		
Climate class (ambient temperature range)		SN (+10°C to +32°C)		SN (+10°C to +32°C)		
Defrosting technique / time		Manual (hot gas) / 10 min.		Manual (hot gas) / 10 min.		
Refrigerant type		R449a		R449a		
External dimensions H x W x D (in)		75.2 x 42.5 x 32.7		75.2 x 59.1 x 32.7		
Dimensions contact plates W x D (in)		2 units of 26.8 x 24.8		2 units of 43.7 x 24.8		
Net weight with standard equipment (lb)		1323		1653		
Operating voltage range		380-400 V - 50/60 Hz (32A) or 480 V - 60 Hz (32A) 3		80-400 V - 50/60 Hz (32A) or 480 V - 60 Hz (32A)		
		Stable running	Freezing Process		Freezing Process	
			Unloaded	Fully loaded (with units at 1000 / 350ml in single layer)	Unloaded	Fully loaded (with units at 1000 / 350ml in single layer)
Power (W)		8200	4800 / 3500 (5700 at defrosting)	17000	6900 / 5400 (10100 at defrosting)	
Energy consumption (kWh/24h)		0.7	3.0 / 1.8 (per freezing cycle)	0.9	4.5 / 2.5 (per freezing cycle)	
Average heat ejection (Kcal/h)		-	3397	-	6219	
Compressor running time (%)		-	90	-	90	
Noise level (dB(A)) (at 1.6m height & 1m distance)		73	73	75	75	

# Ultra Low Temperature Freezers

Models U401, U501, U701, U901

B Medical ULT’s are available in 4 sizes and reflect the highest standard in ULT design and fabrication. Perfect for storing Plasma Bags, Cryoboxes, and Cryovials. The system uses an advanced touch screen control system with alarms and remote monitoring capability. The cooling system is extremely efficient and minimizes waste heat and noise. The standard factory setpoint is -82°C and the temperature is adjustable from -40°C to -86°C. (Energy Star certification: model U701, 60Hz)

- Advanced 7” control touchscreen with pre-installed connection allowing exclusive °B Connected monitoring functionalities.
- Heavy duty door lock mechanism for demanding blood banks, laboratories, or biobanks
- New high-quality coating, certified medical devices quality and antibacterial, high-quality stainless-steelinterior for better longevity and easy cleaning.



Ultra Low Freezers Model		U401	U501	U701	U901
Gross / Net volume (cu ft)		15.9 / 15.3 2	1.1 / 20.4	26.4 / 25.4	31.6 / 30.5
Storage capacity	Plasma bags	300 (350ml)	400 (350ml) 5	00 (350ml)	600 (350ml)
	Cryoboxes	345 (model H50)	460 (model H50)	575 (model H50)	690 (model H50)
	Vials 3	0000 (2ml)	40000 (2ml)	50000 (2ml)	60000 (2ml)
Set temperature (preset)		-82°C	-82°C	-82°C	-82°C
Set temperature (setting range)		-86°C to -40°C	-86°C to -40°C	-86°C to -40°C	-86°C to -40°C
can be adjusted in steps of 0.1°C					
Preset cold / warm alarm limit		-87°C / -77°C	-87°C / -77°C	-87°C / -77°C	-87°C / -77°C
Hold over time (-80°C to -60°C)		1.3 h	1.3 h	1.3 h	1.4 h
Climate class (ambient temperature range)		SN	SN	SN	SN
		(+10°C to +32°C)	(+10°C to +32°C)	(+10°C to +32°C)	(+10°C to +32°C)
Defrosting technique		Manual	Manual	Manual	Manual
Refrigerant type		R290 / R170	R290 / R170	R290 / R170	R290 / R170
External dimensions H x W x D (in)		78.3 x 27.5 x 40.9	78.3 x 33.3 x 40.9	78.3 x 39.1 x 40.9	78.3 x 44.8 x 40.9
Inner dimensions H x W x D (in)		53.9 x 17.6 x 28.1	53.9 x 23.2 x 28.1	53.9 x 29.1 x 28.1	53.9 x 34.9 x 28.1
Net weight with standard equipment (lb)		551	608	655	705
Supply voltage (V)		230	230	230	230
Frequency (Hz)		50	50	50	50
Power (W)		960	990	990	990
Energy consumption (kWh/24h)		9.1	11.3	11.9	12.4
Heat emission (Kcal/h)		326	404	426	444
Compressor running time (%)		46	51	50	59
Noise level (dB(A)) (at 1m height & 1m distance)		57	57	57	57

# Transport Systems

Models MT2, MT4, MT8, MT12

**B Medical Systems' Transport Boxes** are specifically designed for blood banks and blood centers. The 5 models offer a wide variety of transport solutions in terms of storage volume and temperature requirements (-32°C, +4°C, +22°C, +37°C). All models meet the highest safety standards for end-users and patients and are classified as Class II medical devices.

- Boxes are highly resistant external forces
- Eco-friendly foam injection ensures optimal temperature protection of your blood bags
- Certified Medical Device
- Easy handling, greater blood safety and long-term durability



Transport Systems Model		MT2	MT4	MT8	MT12
Cooling system		Passive	Passive	Passive	Passive
Gross volume (cu ft)		0.28	0.71	0.85	
Storage capacity (bags)		1 (450ml)	4 (450ml)	8 (450ml)	15 (450ml)
		2 (270ml)	6 (270ml)	14 (270ml)	25 (270ml)
Cold Life	at +32°C	up to 13.5 h	up to 46 h	up to 57 h	up to 96.14 h
	at +43°C	-	up to 32.5 h	up to 16.39 h	up to 56.5 h
Dimensions	External	8.3 x 9.8 x 5.9	11.8 x 14.3 x 11.1	17.2 x 23.1 x 11.3	19.6 x 21.7 x 18.7
	Inner	5.1 x 7.5 x 3.5	7.3 x 10.2 x 6.1	9.6 x 18.1 x 7.1	10.6 x 13.4 x 10.2
Net weight - empty (lb)		2.9	6.8	5.4	25.8
Gross weight - fully stocked (lb)		4.9	16.8	31.3	55.1
Insulation thickness (polyurethane)		1.18 in	9-1.06 in	1.97-2.36 in	3.54-4.13 in
Material	Outer / Interior	Polyethylene	Polyethylene	Polyethylene	Polyethylene
	Interior container	Polystyrene	Polystyrene	Polystyrene	Stainless steel
European Medical Device Directive		MDD 93/42/EEC Class IIa	MDD 93/42/EEC Class IIa	MDD 93/42/EEC Class IIa	MDD 93/42/EEC Class IIa



## Designed for intensive use

- The special transport boxes, made from rotationally moulded polyethylene (a literally indestructible synthetic), feature an extraordinarily sturdy casing that is almost impervious to external forces, e.g. caused by bumps and falls, whose sturdiness has been proven in drop tests
- The corrosion free material offers easier and safer handling and is light weight. All transport systems can easily and thoroughly be cleaned and disinfected with conventional disinfectants. There are no inaccessible corners or areas inside the transport systems
- The clasps can be sealed or equipped with locks and are therefore protected against unauthorised access during transport



## Highest insulation value

- The polyurethane foam injected into the double walls of these transport systems is free of CFC and HCFC and ensures optimum insulation and protection of quality of the transported goods, especially with longer transport times
- Due to the outer casing's self-insulation against the environment, the B Medical Systems transport systems maintain a stable temperature even at higher ambient temperatures

