

B medical systems

SAVING LIVES THROUGH RELIABLE AND INNOVATIVE TECHNOLOGY

Medical Refrigeration





Special purpose refrigerators and deep freezers, storage and transport systems for Laboratory, Medicine, Research, Biotechnology and Life Sciences.

Saving lives through reliable and innovative technology

UNDERSTANDING THE NEEDS OF MEDICAL PROFESSIONALS REQUIRES A CONSTANT DIALOGUE.

The medical challenges our partners and clients face on the ground can be overwhelming. By continuously engaging with them and gathering insights through dialogue and exchange, we are able to understand their evolving needs. As a key global player in the sector of medical technology, B Medical Systems is committed in delivering highly specialized and cutting-edge devices that always exceed expectations.

DESIGNING RELIABLE MEDICAL DEVICES IS AT THE HEART OF OUR INNOVATION PROCESS.

We feel deeply connected to the international community of healthcare professionals and use optimized industrial processes to offer reliable products and services that help develop a relationship of trust. By managing the design, manufacturing, distribution and after-sales elements, we adopt a lifecycle approach and can ensure the Total Cost of Ownership of our products is as low as possible.

PUTTING PEOPLE FIRST STARTS WITHIN OUR ORGANIZATION.

We take a customer-oriented approach in everything we do, and are guided by our values and high standards. Our team of highly skilled professionals share our desire to excel and stay ahead of the game in the field of technological innovation. As an organization, our core aim is to save lives through reliable and innovative technology.

STATE-OF-THE-ART TECHNOLOGY FOR THE EXACTING NEEDS OF THE MEDICAL WORLD.

B Medical Systems provides solutions for the safe and risk-free storage, transport and handling of products and temperature-sensitive preparations in appropriate conditions. Our state-of-the-art technology covers the entire spectrum of the specific, exacting demands of the market – across hospitals, laboratories, pharmacies, research centres, universities and industry.



SUMMARY

04-05 B Medical Systems Safety Standards
For technical reliability
and environmental friendliness

06-16 Medical Refrigerators, Freezers and Transport Systems For any cooling need in laboratories, research, biotechnology

7-19 °B Connected, DCU & Electronics
For optimum control and protection
of your preparations

A complete line for any solution

Medical Refrigeration

52 / 45

121 / 106

Laboratory Refrigerators L RANGE L 130 L 290 L 380 L 7260 L 400 L 500 L

598 / 510

747 / 636

R | 121 / 106 F | 121 / 106







Safety Standards **B Medical Systems**

The Safety Standards developed by B Medical Systems define certain significant technical features of a product. These ensure the safe storage of the preparations as well as setting the highest standards of safety for the user.

PRECISION LINE	PREMIUM LINE	ML/MP RANGE	
			B Medical Systems Electronics
			B Medical Systems digital display
			B Medical Systems 4,3" digital color display with capacitive buttons
	0		B Medical Systems 7" full touchscreen display
			Safety door lock (with 2 keys) and key-operated power switch ON/OFF (with 2 keys)
			Power indicator light and digital temperature indicator (display: 0.1 digits)
			Controlled fan cooling system for constant temperature and even temperature distribution across the entire refrigerating chamber [not applicable for F models (Precision Line)]
			Automatic switch-off of the evaporator fans when the door opens [not applicable for F models (Precision Line)]
			Self-contained alarm system with integrated battery takes over the alarm function and temperature value measurements in case of system failure for at least 48 hours
			Acoustic and visual alarm signal in case of temperature alarm and system failure
			The alarm history function on the electronic stores all the relevant values during a temperature alarm, such as: min., max. and average temperature [+ alarm duration for Premium Line models]
			Remote transmission alarm signal (via potential-free contact) in case of temperature alarm (change-over contact)
			Safety thermostat prevents dropping of the temperature below +2°C [not applicable for F/U ranges]
			Door opening alarm (visual / acoustic)
			Designed and tested for climatic class SN (ambient temperature range +10°C to +32°C) [not applicable for L/P models (Premium Line) and ML models]
			Designed and tested for climatic class SN / ST (ambient temperature range +10°C to +38°C) [for ML models]
			Designed and tested for climatic class SN / T (ambient temperature range +10°C to +43°C) [for L/P ranges]
			Interior made from stainless steel
		\circ	Internal LED lighting [not applicable for F/U ranges]
			Additional remote transmission alarm signal (via potential-free contact) in case of system failure (change-over contact)
		\circ	Smooth castors for optimum flexibility of movement
			External water cooling [not applicable for L/P ranges]
		\circ	Ambient temperature sensor
0		\circ	°B Connected - Universal software for the monitoring of refrigeration devices, including the acquisition, recording and visualization of temperature data
0		\circ	DCU (Data Communication Unit) - Hardware module monitoring all operating conditions and passing them through to a central database – via local network (in combination with °B Connected)
			Ethernet interface for the visualization of all operating and control functions (hardware and software settings) via *B Connected monitoring software on a peripheral device (computer)

NEW

Innovation for more reliability

In conformity with national and international guidelines, regulations for Medical Devices offering reliability, efficiency and safety at an optimal price.

PRECISION LINE | MODELS L/P55, L/P/F130-290-380 & LF/PF260





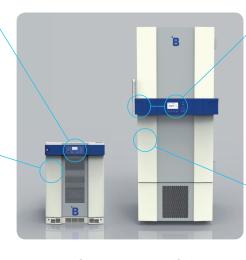
Integrated multi-function monitoring electronics

Integrated B Medical Systems multi-function electronics; with easy access in the door level; offers alarms, central alarm system, set point security, battery backup, full display and many other control features; compatible with °B Connected monitored solution for data monitoring and recording.



Lifetime warranty corrosion-free cabinet

- One piece material cabinet with a lifetime warranty for zero corrosion, highest quality polypropylene for better insulation and no sharp edges to provide easier maintenance and cleaning
- Smart ergonomy Easier and safer handling because of heavier components placed at the bottom



User-friendly and longer lifetime

Exclusive integrated electronics handle bar (Patent pending)

All functionalities are easily accessible:

- · Digital control with full functionalities -Standard multifunction digital sensitive 4.3" panel integrated at optimal level in the door handle with full commands and connections, or optional full 7" touchscreen with pre-installed connection allowing exclusive °B Connected monitoring functionalities
- Open/close Heavy duty door lock mechanism



O High quality materials

New high quality coating, certified medical devices quality and antibacterial, high quality steel for better longevity and easy hygiene control.



Versatile modularity

Excellent storage capacity and modularity - Large choice of shelves and drawers offering modularity for every need.

OUR STANDARDS OF COMPLIANCE - DEPENDING ON THE PRODUCT

DIN 13221 ADR RID (2008/68/CE) **DIN 58345**

IMDG (2002/84/CE)

ICAO-TI / IATA-DGR **DIN 58375**





















Laboratory Refrigerators

B Medical Systems | L Range

9 models • Volume 52 > 895 L • Set temperature +5°C • Climate class SN | SN/T • Compliant to DIN 13221 | MDD 93/42/EEC, Class I



Integrated multi-function monitoring electronics

Integrated B Medical Systems multi-function electronics; with easy access in the door level; offers alarms, central alarm system, set point security, battery backup, full display and many other control features; compatible with °B Connected monitored solution for data monitoring and recording.



Lifetime warranty corrosion-free cabinet

- One piece material cabinet with a lifetime warranty for zero corrosion, highest quality polypropylene for better insulation and no sharp edges to provide easier maintenance and cleaning
- Smart ergonomy Easier and safer handling because of heavier components placed





High storage per square meter in terms of net volume, with a very versatile inner volume utility due to multiple user friendly rails allowing modularity.



Exclusive integrated electronics handle bar (Patent pending)

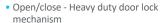
Laboratory Refrigerators are devices intended for the safe storage of samples, specimens, cultures and

other laboratory preparations at cold temperatures **between +4°C and +15°C** with multiple safety features developed as a result of over 35 years of expertise

All functionalities are easily accessible:

in refrigeration technology.







• High quality materials

New high quality coating, certified medical devices quality and antibacterial, high quality steel for better longevity and easy hygiene control.



Versatile modularity

Excellent storage capacity and modularity - Large choice of shelves and drawers offering modularity for every need.

















LF260

Laboratory	
Refrigerators	

Gross / Net volume (I)
External dimensions H x W x D (mm)

670 x 495 x 575

52 / 45

L55

121 / 106 830 x 595 x 695 297 / 269 1670 x 595 x 695

362 / 329 1980 x 595 x 695 R | 121 / 106 F | 121 / 106 1660 x 595 x 695











L400

L500

L700

L900

Gross / Net volume (I)	451 / 384	598 / 510	747 / 636	895 / 763		
External dimensions $H \times W \times D$ (mm)	1988 x 699 x 1039	1988 x 845 x 1039	1988 x 992 x 1039	1988 x 1139 x 1039		



Pharmacy Refrigerators

B Medical Systems | P Range

9 models • Volume 52 > 895 L • Set temperature +5°C • Climate class SN | SN/T • Compliant to DIN 13221* | DIN 58345 | ÖNORM K 2040 | MDD 93/42/EEC, Class |



Integrated multi-function monitoring electronics

Integrated B Medical Systems multi-function electronics; with easy access in the door level; offers alarms, central alarm system, set point security, battery backup, full display and many other control features; compatible with °B Connected monitored solution for data monitoring and recording.



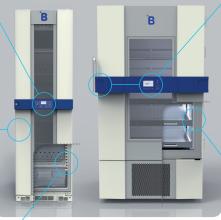
Lifetime warranty corrosion-free cabinet

- One piece material cabinet with a lifetime warranty for zero corrosion, highest quality polypropylene for better insulation and no sharp edges to provide easier
- Smart ergonomy Easier and safer handling because of heavier components placed



High storage capacity

High storage per square meter in terms of net volume, with a very versatile inner volume utility due to multiple user friendly rails allowing modularity.



Exclusive integrated electronics handle bar (Patent pending)

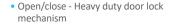
Pharmacy Refrigerators are devices intended for the safe storage of pharmaceuticals, e.g. medications

of expertise in refrigeration technology.

or live virus vaccines, at cold temperatures between +4°C and +15°C with multiple controls and warning safety features developed as a result of over 35 years

All functionalities are easily accessible:







High quality materials

New high quality coating, certified medical devices quality and antibacterial, high quality steel for better longevity and easy hygiene



Versatile modularity

Excellent storage capacity and modularity - Large choice of shelves and drawers offering modularity for every need.



Highest insulation value (organic glass door)

4-layer (Precision Line) and 5-layer (Premium Line) PMMA organic glass offering highest insulation, combined with reduced weight reducing efforts to close door and constraints on hinges, offering better longevity.



* Only for model PF260 (Freezer compartment)



Pharmacy



P55









PF260

Refrigerators

Gross / Net vol	lume (I)
External dimer	sions H x W x D (mm)

52 / 45	
670 x 495 x 575	

121 / 106 830 x 595 x 695

297 / 269 1670 x 595 x 695

362 / 329 1980 x 595 x 695

R | 121 / 106 F | 121 / 106 1660 x 595 x 695











P400

P500

P700

P900

Gross / Net volume (I)	451 / 384	598 / 510	747 / 636	895 / 763
External dimensions H x W x D (mm)	1988 x 699 x 1039	1988 x 845 x 1039	1988 x 992 x 1039	1988 x 1139 x 1039

Medical Refrigerators

B Medical Systems | ML/MP Range

4 models • Volume 670 > 1430 L • Set temperature +5°C • Climate class SN | SN/ST • Compliant to DIN 13221 | DIN 58345*



Integrated multi-function electronics

Integrated B Medical Systems multi-function electronics, compatible with °B Connected monitored solution for data monitoring and recording.



High quality materials

High quality stainless steel, certified antibacterial, for better longevity and easy hygiene control.



High storage capacity

High storage per square meter in terms of net volume, with a very versatile inner volume utility due to multiple user friendly rails allowing modularity.



Special features

- Control of storage temperature and documentation of temperature changes can - depending on the application - be carried out via an optional integrated temperature recorder (in the form of a circular chart recorder) or via the optional DCU, through the Monitoring & Visualization Software °B Connected
- Full compatibility of inner modules and rails, no need to buy new racks, you can keep racks previously used in different ML/MP models
- MP models are equipped with triple insulating glass door (anti-mist) for quick check and pre-selection of the refrigerator's content





Medical Refrigerators are devices intended for the safe storage of laboratory and pharmaceutical preparations at cold temperatures between +4°C and +15°C with multiple safety features developed as a result of over 35 years of expertise in refrigeration technology.



Medical Refrigerators

Gross / Net volume (I)



670 / 615

2050 x 710 x 910



2050 x 1441 x 910





2050 x 1441 x 910

1430 / 1395	670 / 615	1430 / 1395

2050 x 710 x 910



External dimensions H x W x D (mm)



Laboratory Freezers

B Medical Systems | F Range

7 models • Volume 121 > 895 L • Set temperature -41°C / -32°C • Climate class SN • Compliant to DIN 13221 | MDD 93/42/EEC, Class I



Integrated multi-function monitoring electronics

Integrated B Medical Systems multi-function electronics; with easy access in the door level; offers alarms, central alarm system, set point security, battery backup, full display and many other control features; compatible with °B Connected monitored solution for data monitoring and recording.



Lifetime warranty corrosion-free cabinet

- One piece material cabinet with a lifetime warranty for zero corrosion, highest quality polypropylene for better insulation and no sharp edges to provide easier maintenance and cleaning
- Smart ergonomy Easier and safer handling because of heavier components placed at the bottom



High storage per square meter in terms of net volume, with a very versatile inner volume utility due to multiple user friendly rails allowing modularity.



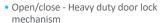
Exclusive integrated electronics handle bar (Patent pending)

Laboratory Freezers are devices intended for

the storage of laboratory products, samples, test materials, chemicals or reagents at temperatures below -20°C developed as a result of over 35 years of expertise in refrigeration technology.

All functionalities are easily accessible:







• High quality materials

New high quality coating, certified medical devices quality and antibacterial, high quality steel for better longevity and easy hygiene control.

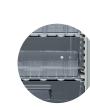


Versatile modularity

Excellent storage capacity and modularity - Large choice of shelves and drawers offering modularity for every need.

Special features for easy deicing and defrosting

- New evaporator offering better performance than market average, resulting in lesser ice formation with automatic defrost
- Insulated inner doors for significantly lower loss of cooling when open







Laboratory Freezers



F130







F380

Gross / Net volume (I)	121 / 106	297 / 269	362 / 329
External dimensions H x W x D (mm)	830 x 595 x 695	1670 x 595 x 695	1980 x 595 x 695











F400

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F700

F900

Gross / Net volume (I)	451 / 384	598 / 510	747 / 636	895 / 763		
External dimensions $H \times W \times D$ (mm)	1988 x 699 x 1039	1988 x 845 x 1039	1988 x 992 x 1039	1988 x 1139 x 1039		



Ultra Low Freezers

B Medical Systems | U Range

4 models • Volume 451>895 L • Set temperature -82°C • Climate class SN • Compliant to DIN 58375 | MDD 93/42/EEC, Class IIa



Exclusive integrated electronics handle bar (Patent pending)

All functionalities are easily accessible:

- Digital control with full functionalities -Standard multifunction digital sensitive 4.3" panel integrated at optimal level in the door handle with full commands and connections, or optional full 7" touchscreen with preinstalled connection allowing exclusive °B Connected monitoring functionalities
 - Open/close Heavy duty door lock mechanism



Special features

- Integrated pressure release valve in the door permitting faster opening in one move, and offering easy access for cleaning
- Insulated inner doors for significantly lower loss of cooling when open
- Full compatibility of inner modules and rails, no need to buy new racks, you can keep racks previously used in different models





Excellent storage capacity and modularity -Large choice of racks offering modularity for every need.





High quality materials

New high quality coating, certified medical devices quality and antibacterial, high quality steel for better longevity and easy hygiene

> Ultra Low Freezers are devices intended for the storage of blood components and blood plasma, human cells, tissues and other laboratory samples at ultra low temperatures down to -86°C. U models reflect the highest and most uncompromising requirements with state-of-the-art technology and economy. The cooling system is optimally designed with respect to energy consumption as well as to the development of waste heat and noise. Standard factory setpoint is -82°C, temperature is adjustable from -40°C to -86°C.



Ultra Low Freezers









U401

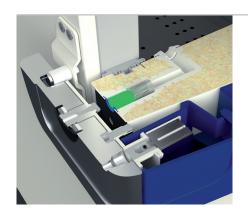
U501

U701

U901

Gross / Net volume (I)		451 / 434	598 / 577	747 / 720	895 / 863		
Storage	Cryoboxes	300 (H 50 x W 136 x D 136 mm)	400 (H 50 x W 136 x D 136 mm)	500 (H 50 x W 136 x D 136 mm)	600 (H 50 x W 136 x D 136 mm)		
capacity	Vials	30000 (2ml)	40000 (2ml)	50000 (2ml)	60000 (2ml)		
External dimensions H x W x D (mm)		1988 x 699 x 1039	1988 x 845 x 1039	1988 x 992 x 1039	1988 x 1139 x 1039		





INTEGRATED PRESSURE RELEASE VALVE

This aluminium die cast handle offers a strong and ergonomic feeling that allows the user to open the door with one hand. Inside the freezers, the vacuum will be automatically removed through a release valve, located in the door, in order to allow easy cleaning.

The handle is equipped with an electric lock that can be deactivated through the user interface.



Transport Systems

B Medical Systems | MT Range

6 models • Volume 2.2 > 90 L • Compliant to ADR | RID | IMDG | ICAO-TI | IATA-DGR | MDD 93/42/EEC, Class IIa*







DOT/



MATO



DOT12



MATOR



MT100

	10112	10114	10110	111112	101125	1011100
Cooling system	Passive	Passive	Passive	Passive	Passive	Active (Compressor)
Gross volume (I)	2.2	8	20	24	44	90
External dimensions H x W x D (mm)	210 x 250 x 150	299 x 362 x 283	437 x 588 x 288	499 x 550 x 475	499 x 710 x 550	1000 x 520 x 800

Transport Systems are devices intended for the safe transport of temperature-sensitive products. The model range MT consists of five passive transport systems and one active transport box, working with a compressor. B Medical Systems transport systems are ideal for intensive use with many transport applications, even under difficult climatic conditions.

MT models conform with the European agreement on the international transport of hazardous goods by Road (ADR), by Rail (RID), by sea (IMDG) and with the International agreement for air transport (ICAO-TI / IATA-DGR).

For all passive transport boxes eutectic cooling systems are available as an option (-32°C, +4°C, +22°C and +37°C).

Optimum control and protection

B Medical Systems | °B Connected & DCU

B CONNECTED | MONITORING SOFTWARE

Universal software for the monitoring of refrigeration devices, including the acquisition, recording and visualization of temperature data.



- Unique monitoring software for the full range of Blood Management Solutions and Medical Refrigeration products
- Web-based interfaces for computers and mobile devices
- Modern design for simple and intuitive use
- Graphic display of temperature curves
- Integrated event and activity history of appliances' components
- Data recording on centralized database for long-term archiving
- Easy setting of specific alarm forwarding, via email or SMS
- Generation of reports compiling crucial data and activities
- Temperature and detailed device data export for third-party software
- Important price advantage compared to a traditional circular chart recorder and its spare parts
- REST API to access raw data directly from the database in read only mode

KEY BENEFITS:

- Unique interface for the monitoring of the full range of refrigeration devices
- Centralized database providing data access to entire customer network

DCU | DATA COMMUNICATION UNIT (PRECISION LINE & ML/MP RANGE)

Hardware module monitoring all operating conditions and passing them through to a central database – via local network.



- Interface connection of B Medical Systems appliances to an existing network
- Graphical user interface displaying temperature and configurating devices and alarms easily
- Direct connection to Ethernet and serial bus RS485
- Digital in/out (programmable and customer-specific use)
- Recording and storing appliance relevant data
- Integrated USB port allowing to export stored data
- The DCU combined with the °B Connected software replaces the paper temperature recorder
- All data are recorded and save in the internal storage of the DCU and backed up in °B Connected data base if connected
- Several additional self-sufficient temperature sensors (up to 4 PT1000) may be connected
- Humidity sensor input (4-20 mA)

KEY BENEFITS:

- Central system collecting relevant temperature data of the appliances and their respective operating conditions
- A number of connection facilities allowing flexible upgrades for individual projects

°B Connected & DCU offer a highly flexible system that is adaptable to specific customer requirements

- > Complete & legally safe documentation of temperature data
- > Comprehensive applications and diagnostic possibilities

Full functionalities at a glance

B Medical Systems | Electronics

PRECISION LINE | Multifunctional electronics with digital display and easy access, in the door handle; compatible with °B Connected monitored solution.



• Key power switch • O = OFF / I = ON

- To switch the unit on, turn the key switch to position "I". The green power LED lights up
- After the self-check, the temperature inside the device is displayed



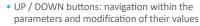
O Digital display

During normal operation the display shows:

- Left-hand side: current time and internal temperature displayed in °C (Celsius) or °F (Fahrenheit) in increments of 0.1°
 - Right-hand side: the maximum and minimum inside temperature



Function buttons





 ENTER button: use the ENTER-key to confirm the actual selection. This applies to the parameter value. The change of a parameter only becomes effective when confirmed



 MUTE / BACK button: in case of an alarm, the acoustic alarm can be muted for a specified time. In Parameter-mode the same key acts a "BACK-button" to go one step back



 LIGHT button: allows to switch on or off the interior light of the device without opening the door (for L and P ranges)





Acoustic and visual alarm signal

When an alarm occurs, the red alarm LED lights up and an acoustic signal sounds. The corresponding alarm message appears on the display alternately with the measured inside temperature. If several alarms occur simultaneously, the messages will be shown alternately.



A USB port is available for data export only. Measured values of the display sensor are stored for at least 30 days (ring buffer) together with a time stamp.



The new B Medical Systems Electronics

offers a wide range of adjustment and diagnostic facilities as well as additional protection / warning operations (via external alarm operations, histories and individual display signals).

PREMIUM LINE | Multi-function electronics with 4,3" digital color display and capacitive buttons, integrated at optimal level in the door handle with full commands and connections.



OFF / ON

- To switch on press the ON/OFF button for 1 second. The green LED will light up
 - Switch off protected by password.
 The door will automatically unlock before powering down



O Digital color 4,3" display

During normal operation the display shows:

- At the top: current voltage, current time, defrosting (for F range) and gasket heater (for F and U ranges)
- Left-hand side: internal temperature displayed in °C (Celsius) or °F (Fahrenheit) in increments of 0.1°
- Right-hand side: temperature of the regulation sensor. Displaying this temperature can be disabled through the settings



○ USB-port & SD-card-slot

Acoustic and visual alarm signal

When an alarm occurs, the red alarm LED lights up and an acoustic signal sounds. The corresponding alarm message appears on the display together with the measured inside temperature. If several alarms occur simultaneously, the messages will be shown alternately.



Capacitive buttons

- ARROW buttons: select screen items with the arrow buttons. In parameter editing mode, the arrow buttons are used to change values
- ENTER button: activates the currently selected item
- BACK button: goes one level upwards in the menu tree structure. It also serves as "escape" button
- DOOR UNLOCK button: unlocks the door of the device
- MENU button: opens the menu screen
- ALARM MUTE button: deactivates the acoustic alarm for a predefined period of time

















Discover the ultimate control experience with the new B Medical Systems 7" full touchscreen display

More comfortable, more functionalities, no compromise!





around the world

Reliable solutions for safe vaccination



State-of-the-art technology for the exacting needs of the medical world







After Sales support and service

We strive to provide you with the highest standards of service; not only through our selected distributors and partners for all your maintenance and service but also our second line trouble shooting and after sales service. This Factory based group of engineers is there to help our partners and yourself to get the best solution for your cold storage needs.

Safe global blood management: from collection to transfusion, transportation, processing and storage

Our Global Expertise



SAVING LIVES THROUGH RELIABLE AND INNOVATIVE TECHNOLOGY

B Medical Systems (formerly Dometic Medical Systems) has more than 35 years' experience in the medical refrigeration sector.

The company, formerly known as Electrolux Medical Systems, was founded in 1979 when the World Health Organization approached Electrolux in Vianden, Luxembourg, to create a solution for the safe storage and transport of vaccines around the world. In 2001, Electrolux Medical Systems became part of the Dometic Group, and was renamed Dometic Medical Systems. Having established a legitimate reputation in the medical equipment industry, the company has also become a global leader in vaccine cold chain.

B Medical Systems S.à r.l.

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Luxembourg, in the heart of Europe

