



medical
systems

Your global partner to save lives.



BIOMEDICAL REFRIGERATION

Innovative and reliable refrigeration solutions

B Medical Systems's Biomedical Refrigeration product range is the solution for safe storage, transport & handling of temperature sensitive preparations in the appropriate optimum conditions without any risks.

The products cover the spectrum of the specific and exacting needs of the market : hospitals, laboratories, pharmacies, blood banks, research centres, universities and industry.

08/2016

292.9707.33



www.bmedicalsystems.com



medical
systems



B Medical Systems

Your global partner to save lives.

B Medical Systems S.à r.l. is a pioneer in the medical industry. The company was founded in 1979 when the World Health Organization approached Electrolux in Vianden, Luxembourg, to provide a solution to their problems in safely storing and transporting vaccines around the world. Subsequently, the Electrolux refrigeration division became the Dometic Group.

In March 2015 Navis Capital Partners and the management team acquired the medical division from the Dometic Group under the new name B Medical Systems S.à r.l.. The name change reflects the deep conviction of the team and shareholders, to continuously deploy dedicated solutions in its customers in the healthcare field.

B Medical Systems S.à r.l. specializes in research, development and the manufacture of professional refrigerators, freezers, storage and solutions for safe transport and management of blood and vaccines. With our worldwide network of distributors, our own Research and Development capability and flexible manufacturing facilities, we will continually strive for excellence in product development, manufacturing and customer service across all of our product lines.

We are committed to exploring new technologies, increasing the variety of our products and seeking new fields of business. B Medical Systems S.à r.l. is a flexible, innovative and customer-oriented company, which has always been recognized for the excellence and performance of its products. We have always based our reputation on one rule: "never compromising on standards" to deliver the best performance these programs deserve, for humanity.

Over the past few years, we have been supported extensively and passionately by our regional consultants and country partners who dedicate themselves to our cause and have gained credibility in their own right with the regional agencies and country authorities.



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

SUMMARY

Pages	
04 – 05	B Medical Systems Safety and Green Standards For technical reliability and environmental friendliness
06 – 07	European Medical Device Directive 93/42/EEC For increased reliability to comply with European essential requirements
08 – 22	Biomedical Refrigerators, Freezers and Transport Systems For any cooling need in laboratories, research, biotechnology
23 – 25	Electronic & Software For optimum control and protection of your preparations

PRODUCTS OVERVIEW

BIOMEDICAL REFRIGERATION

Depending on the product

BR | +4°C BLOOD BANK REFRIGERATORS

Gross / Net volume (l) Storage capacity (blood bags) Energy consumption (kWh/24h)	106 / 92 54 (450ml) / 72 (350ml) 0.75	246 / 167 120 (450ml) / 160 (350ml) 1.50 0.95	408 / 319 240 (450ml) / 320 (350ml) 1.70 1.00	489 / 395 300 (450ml) / 400 (350ml) 1.90 1.10	746 / 620 450 (450ml) / 550 (350ml) 2.00 1.20

MF / DMF | -41°C / -35°C DEEP FREEZERS

FOR A SAFE STORAGE OF PLASMA (MF - DIN 58375) / OF SENSITIVE PRODUCTS (DMF)

Gross / Net volume (l) Storage capacity (plasma bags) Energy consumption (kWh/24h)	110 / 104 MF: 69 (450ml) / 69 (350ml) 1.70	290 / 265 MF: 168 (450ml) / 168 (350ml) 2.30	753 / 733 450 (450ml) / 550 (350ml) 7.10

FR / DFR | -41°C / -35°C DEEP FREEZERS

FOR A SAFE STORAGE OF PLASMA (FR - DIN 58375) / OF SENSITIVE PRODUCTS (DFR)

Gross / Net volume (l) Storage capacity (plasma bags) Energy consumption (kWh/24h)	106 / 104 FR: 54 (450ml) / 72 (350ml) 4.00	246 / 167 FR: 120 (450ml) / 160 (350ml) 6.10	408 / 319 FR: 240 (450ml) / 320 (350ml) 7.40	489 / 395 FR: 300 (450ml) / 400 (350ml) 7.80	738 / 620 FR: 450 (450ml) / 550 (350ml) 7.10

ML (solid door) / MP (glass door) | +5°C

LABORATORY / MEDICINE / PHARMACEUTICAL REFRIGERATORS (DIN 58345)

Gross / Net volume (l) Storage capacity Energy consumption (kWh/24h)	155 / 141 ML:0.54 MP:0.76	353 / 340 ML:1.41 MP:1.86	367 / 325 ML:1.15 MP:1.55	Refrig.: 233 / 218 & Freezer: 146 / 128 670 / 615 ML:1.10 MP:1.50	1430 / 1395 ML:1.90 MP:2.50

LR (solid door) / PR (glass door) | +4°C

LABORATORY / MEDICINE / PHARMACEUTICAL REFRIGERATORS (DIN 58345)

Gross / Net volume (l) Storage capacity Energy consumption (kWh/24h)	106 / 92 LR:1.40 PR:1.50 0.95	246 / 167 LR:1.40 PR:1.50 0.95	408 / 319 LR:1.60 PR:1.70 1.00	489 / 395 LR:1.80 PR:1.90 1.10	746 / 620 LR:1.90 PR:2.00 1.20

UF | -86°C

ULTRA DEEP FREEZERS

Gross / Net volume (l) Storage capacity (plasma bags) Energy consumption (kWh/24h)	453 / 440 270 (450ml) / 330 (350ml) 17.50 12.00	753 / 733 450 (450ml) / 550 (350ml) 19.00 13.00

Built-in & Sub-assembly Models

FOR LABORATORY FURNITURE

ML:0.50 MP:0.70	Perfect width and height to fit in every laboratory furniture

MBF | -30°C

HIGH PERFORMANCE CONTACT SHOCK FREEZERS

Plasma bags at 1000ml (content 850ml) / 350ml (content 225ml) 8 / 12	14 / 21	28 (2 x 14) / 42 (2 x 21)

MT | TRANSPORT SYSTEMS

(ADR / RID / IMDG / ICAO-TI / IATA-DGR)

Gross volume (l) Storage capacity (blood bags)	8 4 (450ml) / 6 (270ml)	20 8 (450ml) / 14 (270ml)	24 15 (450ml) / 25 (270ml)	44 25 (450ml) / 40 (270ml)	90 48 (450ml)	290 187 (icepack at 0.6l)

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 the trend-setting safety of the user.

The B Medical Systems Silver Safety Standard ensures the reliable and safe operation of all B Medical Systems refrigerators and deep freezers. Safety for the stored preparations and the user. Silver models are denominated with a "S".

The B Medical Systems Gold Safety Standard efficiently complements the safety requirements of the B Medical Systems Silver Safety Standard and therefore exceeds even the official standards. Gold models are denominated with a "G".



B Medical Systems Electronic ¹	■	■
B Medical Systems Touchscreen Display ⁵	-	□
Safety door lock with 2 keys	■	■
Key-operated power switch (power ON/OFF) with 2 keys	■	■
Power indicator light	■	■
Digital temperature indicator (display: 0.1 digits)	■	■
Controlled fan cooling system for constant temperature and even temperature distribution across the entire refrigerating chamber. Automatic switch-off when front door opens ²	■	■
Self-contained alarm system with integrated battery takes over the alarm function and temperature value measurements in case of power failure for at least 48 hours ¹	■	■
Acoustic and visual alarm signal in case of temperature alarm and power failure	■	■
The alarm history on the electronic stores all the relevant values during a temperature alarm, such as: min., max. and average temperature & also the duration of the alarm ¹	■	■
Remote transmission alarm signal (via potential-free contact) in case of temperature alarm (change-over contact)	■	■
Control via self-diagnostic system	■	■
Safety thermostat prevents dropping of the cold storage product's temperature below +2°C ³	■	■
Door opening alarm (visual / acoustic)	■	■
Designed and tested for climatic class SN / T (ambient temperature range +10°C to +43°C) ⁴	-	■
Designed and tested for climatic class SN (ambient temperature range +10°C to +32°C) ⁸	■	-
RS 485 interface for the visualization of all operating and control functions (hardware and software settings) via DMN monitoring software on a peripheral device (computer) ¹	■	■
Interior made from stainless steel	-	■
Internal LED lighting ⁶	□	■
Smooth castors for optimum flexibility of movement ⁵	-	■
GMP Clean Room Classification for free standing installation: in clean rooms of GMP A / ISO 5 (ISO EN 14644-1) ⁷	-	■
GMP Clean Room Classification for free standing installation: in clean rooms of GMP B / ISO 6 (ISO EN 14644-1)	■	-
Additional remote transmission alarm signal (via potential-free contact) in case of power failure (change-over contact)	■	■
External water cooling ⁵	-	□
DMN - Data Monitoring Network ¹	■	■
Ambient temperature sensor	□	□
DCU - Data Communication Unit	□	□

■ standard □ optional - not available

¹ Not for underbench models ML / MP 135 SG

² Not for models UF 455 & 755 G / GG, FR / DFR 110 GG, MF / DMF 110 & 290 SG and MF 755 GG

³ For refrigerators

⁴ Models FR / DFR 110 GG - 750 G, UF 455 & 755 G / GG and MF 755 GG designed and tested for climate class SN (ambient temperature range +10°C to +32°C)

⁵ Not for models BR / DFR / FR / LR / PR 110 GG

⁶ For model ranges BR, LR and PR only, optional for model ranges ML and MP only

⁷ Model range UF conform to the GMP Clean Room Class B (cleaning cycles according to the operator's hygiene plan must be scheduled and observed)

⁸ Models ML for climatic class SN/ST (ambient temperature range +10°C to +38°C)



B Medical Systems's concept "Your global partner to save lives" affects not only humans, but also our environment that is the base for all life. Hence we have committed ourselves to the radical minimization of our products' CO₂ output.

B Medical Systems is pleased to announce a complete new range of high efficient and low noise appliances using natural gases such as isobutane, propane and ethane as refrigerants.

These new "green" models convince by their technical optimizations in terms of economy and environmental protection :

- Use of environmentally friendly, natural gases as refrigerants accompanied by enormous reduction of CO₂ emissions
- 40 - 60% less energy consumption
- Over 80% less heat ejection
- Up to 40% less power needed

In addition, the new models stand out because of :

- Improved hold over times thanks to optimized door insulation
- Drastically reduced noise level for more workplace convenience

Green Standards



Environmentally friendly refrigerants	■
Reduced energy consumption	■
Reduced CO ₂ emission	■
Less heat ejection	■
Less power needed	■
"Green" models are denominated as "SG" (Silver & Green ■ ■) or "GG" (Gold & Green ■ ■).	



B Medical Systems S.à r.l. successfully passed the certification audit according to the harmonized European Quality Management System Standard for Medical Devices EN 13485 and the European Medical Device Directive 93 / 42 / EEC.

All medical devices manufactured by B Medical Systems S.à r.l. will be labeled with the CE-Label (CE 0123). The product in question concerns blood product cooling devices / blood bank refrigerators. A blood storage refrigerator and a blood storage freezer are devices intended for medical purposes that are used to preserve blood and blood products by storing them at cold or freezing temperatures.

Our medical device products will be all blood banks refrigerators from our range BR, as well as all plasma freezers from our ranges MF and FR.



Why the EN 13485 certification?

This EN Standard was published in 2003 and represents the requirements for a comprehensive management system for the design and manufacture of Medical Devices.

This certificate demonstrates that an organization is able to provide Medical Devices and related services, meeting customer and regulatory requirements applicable to medical devices and related services. The

primary objective is to facilitate harmonized Medical Device regulatory requirement for quality management system.

The positive assessment to this certificate allows the CE Mark and the permission to sell the Medical Device in the European Union.

BR | +4°C Blood Bank Refrigerators



FR / MF | -41°C / -35°C Deep Freezers & Plasma Storage Freezers



The real importance of the directive 93/42/EEC

The Medical Device Directive, Council Directive 93/42/EEC of June 1993, is a "new approach" Directive in order for a manufacturer to legally place a medical device on the European market. The consolidated directive is mandatory since March 2010 and establishes essential requirements and standards for the manufacture, design and packaging of medical devices.

The Medical Device calls for all manufacturers who distribute in the European Economic Area to comply with essential requirements that benefits the safety. The devices must be designed and manufactured in such a way that as they are used by users, they will no way compromise the health of patients.

BR range



BR range
BR models comply with the B Medical Systems Gold Safety Standard and even exceed official safety standards.

Refrigerators for the legally safe storage of blood bags / erythrocyte concentrates at +4°C

> according to DIN 58371, ÖNORM K 2030 & Medical Device 93/42/EEC

The interior temperature of the blood refrigerators is monitored via an autonomous control sensor and adjusted to +4°C. This ensures that the product temperature of the stored preparations is kept at +4°C ± 1.5°C.

The models of the BR range feature a natural defrosting system that does not affect the product temperature of the stored preparations during defrosting.

BR models are equipped with a glass door for quick checks and pre-selection of the refrigerator's content.

The transparent front panel of the ST-Drawers, which are part of the standard equipment of the BR models, minimize cold losses when the door is opened.

Models BR 250 - 750 G are available as 220 V (50/60 Hz) and 115 V (60 Hz) versions.



The BR range comprises 5 Blood Refrigerators that are built in compliance with the requirements of :

- DIN 58371 (Germany, "Blutkonserven-Kühlgeräte" / Blood Refrigerators)
- ÖNORM K 2030 (Austria, "Blutkonserven-Kühlschränke" / Blood Refrigerators)
- European Medical Device Directive 93/42/EEC

In conformity with:

- AS 3864 (Australia, "Medical refrigeration equipment – for the storage of blood & blood products")
- BS 4376-1: 1991 (UK, "Electrically operated blood storage refrigerators. Specifications for closed reach-in types")
- European Directive "Guide to preparation, use and quality assurance of blood components"

BR 410 G / GG



	BR 410 G	GG
Gross volume (l)	408	
Net volume (l)	319	
Storage capacity (blood bags)	240 at 450 ml 320 at 350 ml	
External dimensions H x W x D (mm)	1735 x 850 x 785	
Energy consumption (Kwh/24h)	1.70	1.00
Noise level (dB(A))	51	42

BR 490 G / GG



	BR 490 G	GG
Gross volume (l)	489	
Net volume (l)	395	
Storage capacity (blood bags)	300 at 450 ml 400 at 350 ml	
External dimensions H x W x D (mm)	1950 x 850 x 785	
Energy consumption (Kwh/24h)	1.90	1.10
Noise level (dB(A))	51	42

BR 750 G / GG



	BR 750 G	GG
Gross volume (l)	746	
Net volume (l)	620	
Storage capacity (blood bags)	450 at 450 ml 550 at 350 ml	
External dimensions H x W x D (mm)	1990 x 910 x 985	
Energy consumption (Kwh/24h)	2.00	1.20
Noise level (dB(A))	51	42

BR 110 GG



	BR 110 GG
Gross volume (l)	106
Net volume (l)	92
Storage capacity (blood bags)	54 at 450 ml 72 at 350 ml
External dimensions H x W x D (mm)	820 x 560 x 580
Energy consumption (Kwh/24h)	0.75
Noise level (dB(A))	41

BR 250 G / GG



	BR 250 G	GG
Gross volume (l)	246	
Net volume (l)	167	
Storage capacity (blood bags)	120 at 450 ml 160 at 350 ml	
External dimensions H x W x D (mm)	1305 x 850 x 785	
Energy consumption (Kwh/24h)	1.50	0.95
Noise level (dB(A))	49	42

FR / MF range

CE0123



Freezers for the low-temperature storage of plasma and other substances under optimum conditions

> according to DIN 58375 & Medical Device 93/42/EEC

B Medical Systems's Biomedical Freezer range is the perfect solution for a safe storage and handling of temperature-sensitive preparations such as plasma and other blood products in conformity with national and international norms and guidelines. Models FR 250 - 750 G are available as 220 V (50/60 Hz) version, model MF 290 SG as 220 V (50/60 Hz) & 115 V (60 Hz) versions and model MF 110 SG as 115 V (60Hz) version.



FR range

FR models comply with the B Medical Systems Gold Safety Standard and even exceed official safety standards.

FR 110 GG



FR 110	GG
Gross volume (l)	106
Net volume (l)	104
Storage capacity (plasma bags)	54 at 450 ml 72 at 350 ml
External dimensions H x W x D (mm)	820 x 560 x 580
Energy consumption (Kwh/24h)	4.00
Noise level (dB(A))	47

FR 250 G



FR 250	G
Gross volume (l)	246
Net volume (l)	167
Storage capacity (plasma bags)	120 at 450 ml 160 at 350 ml
External dimensions H x W x D (mm)	1305 x 850 x 785
Energy consumption (Kwh/24h)	6.10
Noise level (dB(A))	58

MF 110 SG



MF 110	SG
Gross volume (l)	110
Net volume (l)	104
Storage capacity (plasma bags)	69 at 450 ml 69 at 350 ml
External dimensions H x W x D (mm)	900 x 595 x 630
Energy consumption (Kwh/24h)	1.70
Noise level (dB(A))	41

MF 290 SG



MF 290	SG
Gross volume (l)	290
Net volume (l)	265
Storage capacity (plasma bags)	168 at 450 ml 168 at 350 ml
External dimensions H x W x D (mm)	1830 x 595 x 625
Energy consumption (Kwh/24h)	2.30
Noise level (dB(A))	44

MF 755 GG



MF 755	GG
Gross volume (l)	753
Net volume (l)	733
Storage capacity (plasma bags)	450 at 450 ml 550 at 350 ml
External dimensions H x W x D (mm)	1990 x 910 x 950
Energy consumption (Kwh/24h)	7.10
Noise level (dB(A))	54

FR 410 G



FR 410	G
Gross volume (l)	408
Net volume (l)	319
Storage capacity (plasma bags)	240 at 450 ml 320 at 350 ml
External dimensions H x W x D (mm)	1735 x 850 x 785
Energy consumption (Kwh/24h)	7.40
Noise level (dB(A))	58

FR 490 G



FR 490	G
Gross volume (l)	489
Net volume (l)	395
Storage capacity (plasma bags)	300 at 450 ml 400 at 350 ml
External dimensions H x W x D (mm)	1950 x 850 x 785
Energy consumption (Kwh/24h)	7.80
Noise level (dB(A))	58

FR 750 G



FR 750	G
Gross volume (l)	738
Net volume (l)	620
Storage capacity (plasma bags)	450 at 450 ml 550 at 350 ml
External dimensions H x W x D (mm)	1990 x 910 x 985
Energy consumption (Kwh/24h)	7.10
Noise level (dB(A))	58

ML range
(solid door)



Refrigerators for the storage of laboratory and pharmaceutical preparations being subject to cold chain and temperature sensitivity
> according to DIN 58345

The product range ML / MP offers volumes from 155 to 1430 litres including one combined refrigerator / freezer model.

MP models are equipped with glass door for quick check and pre-selection of the refrigerator's content. ML models are equipped with solid door.

Being in conformity with the B Medical Systems Silver Safety Standard these models ensure a reliable and safe operation.



MP range
(glass door)



ML / MP 155 SG



fig. MP 155 SG

ML / MP 155	SG
Gross volume (l)	155
Net volume (l)	141
External dimensions H x W x D (mm)	ML : 900 x 595 x 630 MP : 900 x 595 x 605
Energy consumption (Kwh/24h)	ML : 0.54 MP : 0.76
Noise level (dB(A))	41
ML 155 SG available as Internal ☺ II 3 G Ex nA II T6	

ML / MP 355 S

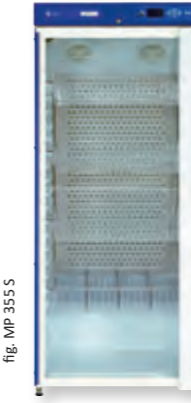


fig. MP 355 S

ML / MP 355	S
Gross volume (l)	353
Net volume (l)	340
External dimensions H x W x D (mm)	1690 x 700 x 616
Energy consumption (Kwh/24h)	ML : 1.41 MP : 1.86
Noise level (dB(A))	44

ML / MP 370 SG



fig. MP 370 SG

ML / MP 370	SG
Gross volume (l)	367
Net volume (l)	325
External dimensions H x W x D (mm)	1830 x 595 x 625
Energy consumption (Kwh/24h)	ML : 1.15 MP : 1.55
Noise level (dB(A))	42
ML 370 SG available as Internal ☺ II 3 G Ex nA II T6	

ML / MP 380 CSG

Refrigerator & Deep Freezer combined



fig. MP 380 CSG

ML / MP 380	CSG
Gross volume (l)	233 (Refrig.) + 146 (Freezer)
Net volume (l)	218 (Refrig.) + 128 (Freezer)
External dimensions H x W x D (mm)	2030 x 595 x 625
Energy consumption (Kwh/24h)	ML : 0.60 (Refrig.) + 2.10 (Freezer) MP : 0.88 (Refrig.) + 2.10 (Freezer)
Noise level (dB(A))	45

ML / MP 670 SG



fig. MP 670 SG

ML / MP 670	SG
Gross volume (l)	670
Net volume (l)	615
External dimensions H x W x D (mm)	2050 x 710 x 910
Energy consumption (Kwh/24h)	ML : 1.10 MP : 1.50
Noise level (dB(A))	47

ML / MP 1430 SG



fig. MP 1430 SG

ML / MP 1430	SG
Gross volume (l)	1430
Net volume (l)	1395
External dimensions H x W x D (mm)	2050 x 1441 x 910
Energy consumption (Kwh/24h)	ML : 1.90 MP : 2.50
Noise level (dB(A))	50

LR range
(solid door)



Refrigerators for the storage of laboratory and pharmaceutical preparations being subject to cold chain and temperature sensitivity > according to DIN 58345

The product range LR / PR offers volumes from 106 to 746 litres. PR models are equipped with glass door for quick check and pre-selection of the refrigerator's content. LR models are equipped with solid door.

The transparent front panels of the ST-Drawers, which are part of the standard equipment of the PR models, minimize cold losses when the door is opened.

Being in conformity with the B Medical Systems Gold Safety Standard these models even exceed official safety standards.

Models LR and PR 250 - 750 G are available as 220 V (50/60 Hz) & 115 V (60 Hz) versions.



PR range
(glass door)



LR / PR range

LR / PR models comply with the B Medical Systems Gold Safety Standard and even exceed official safety standards.

LR / PR 110 GG



LR / PR 110	GG
Gross volume (l)	106
Net volume (l)	92
External dimensions H x W x D (mm)	820 x 560 x 580
Energy consumption (Kwh/24h)	0.75
Noise level (dB(A))	41

LR 110 GG available as Internal Ⓢ II 3 G Ex nA II T6

LR / PR 250 G / GG



LR / PR 250	G	GG
Gross volume (l)	246	
Net volume (l)	167	
External dimensions H x W x D (mm)	1305 x 850 x 785	
Energy consumption (Kwh/24h)	LR : 1.40 PR : 1.50	LR : 0.90 PR : 0.95
Noise level (dB(A))	49	42

LR 250 G/GG available as Internal Ⓢ II 3 G Ex nA II T6

LR / PR 410 G / GG



LR / PR 410	G	GG
Gross volume (l)	408	
Net volume (l)	319	
External dimensions H x W x D (mm)	1735 x 850 x 785	
Energy consumption (Kwh/24h)	LR : 1.60 PR : 1.70	LR : 0.95 PR : 1.00
Noise level (dB(A))	51	42

LR / PR 490 G / GG



LR / PR 490	G	GG
Gross volume (l)	489	
Net volume (l)	395	
External dimensions H x W x D (mm)	1950 x 850 x 785	
Energy consumption (Kwh/24h)	LR : 1.80 PR : 1.90	LR : 1.00 PR : 1.10
Noise level (dB(A))	51	42

LR 490 G/GG available as Internal Ⓢ II 3 G Ex nA II T6

LR / PR 750 G / GG



LR / PR 750	G	GG
Gross volume (l)	746	
Net volume (l)	620	
External dimensions H x W x D (mm)	1990 x 910 x 985	
Energy consumption (Kwh/24h)	LR : 1.90 PR : 2.00	LR : 1.10 PR : 1.20
Noise level (dB(A))	51	42

DFR / DMF range



DFR 110 GG DFR 250 G DFR 410 G DFR 490 G DFR 750 G DMF 110 SG DMF 290 SG

Freezers for the low-temperature storage of temperature-sensitive products under optimum conditions

B Medical Systems's Biomedical Freezer range is the perfect solution for a safe storage and handling of temperature-sensitive preparations or samples in conformity with national and international norms and guidelines.

Models DFR 250 - 750 G are available as 220 V (50/60 Hz) version, model DMF 290 SG as 220 V (50/60 Hz) & 115 V (60 Hz) versions and model DMF 110 SG as 115 V (60Hz) version.



DFR range
DFR models comply with the B Medical Systems Gold Safety Standard and even exceed official safety standards.

DFR 110 GG



DFR 110	GG
Gross volume (l)	106
Net volume (l)	104
External dimensions H x W x D (mm)	820 x 560 x 580
Energy consumption (Kwh/24h)	4.00
Noise level (dB(A))	47
Conform with Internal	II 3 G Ex nA II T6

DFR 250 G



DFR 250	G
Gross volume (l)	246
Net volume (l)	167
External dimensions H x W x D (mm)	1305 x 850 x 785
Energy consumption (Kwh/24h)	6.10
Noise level (dB(A))	58
Conform with Internal	II 3 G Ex nA II T6

DFR 410 G



DFR 410	G
Gross volume (l)	408
Net volume (l)	319
External dimensions H x W x D (mm)	1735 x 850 x 785
Energy consumption (Kwh/24h)	7.40
Noise level (dB(A))	58
Conform with Internal	II 3 G Ex nA II T6

DFR 490 G



DFR 490	G
Gross volume (l)	489
Net volume (l)	395
External dimensions H x W x D (mm)	1950 x 850 x 785
Energy consumption (Kwh/24h)	7.80
Noise level (dB(A))	58
Conform with Internal	II 3 G Ex nA II T6

DFR 750 G



DFR 750	G
Gross volume (l)	738
Net volume (l)	620
External dimensions H x W x D (mm)	1990 x 910 x 985
Energy consumption (Kwh/24h)	7.10
Noise level (dB(A))	58
Conform with Internal	II 3 G Ex nA II T6



DMF 110 SG



DMF 110	SG
Gross volume (l)	110
Net volume (l)	104
External dimensions H x W x D (mm)	900 x 595 x 630
Energy consumption (Kwh/24h)	1.70
Noise level (dB(A))	41
Conform with Internal	II 3 G Ex nA II T6

DMF 290 SG



DMF 290	SG
Gross volume (l)	290
Net volume (l)	265
External dimensions H x W x D (mm)	1830 x 595 x 625
Energy consumption (Kwh/24h)	2.30
Noise level (dB(A))	44
Conform with Internal	II 3 G Ex nA II T6

DMF range
DFR models comply with the B Medical Systems Silver Safety Standard and even exceed official safety standards.

UF range



Ultra Deep models for freezing down to -86°C

The models UF 455 G / GG & UF 755 G / GG reflect the highest and most uncompromising requirements in 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.

The UF 755 GG can definitely be denominated as the Ultra Deep Freezer with the lowest energy consumption on the whole market (compared with products with the same internal temperatures and volume).



Horizontal contact shock freezing technology for blood plasma, biological and pharmaceutical preparations

B Medical Systems's High Performance Contact Shock Freezers are designed for the fast freezing of blood plasma, biological and pharmaceutical preparations to a core temperature of -30°C.

MBF models are built in compliance with directives for the preparation of blood plasma.

Principle / Mode of operation

Contact cover plate fixed, separately controlled



Contact operating plate adjustable, separately controlled

MBF 12



MBF 12	
8 plasma bags at 1000 ml (content 850 ml)	
12 plasma bags at 350 ml (content 225 ml)	
Freezing time to core temperature of -30°C	12 units (350 ml) ~ 20 min 8 units (1000 ml) ~ 45 min
External dimensions (H x W x D)	1590 x 960 x 770 mm
Operating temperature (preset), reached within ~ 20 min (pre-cooling phase)	-45°C (upper & lower contact plate)

MBF 21



MBF 21	
14 plasma bags at 1000 ml (content 850 ml)	
21 plasma bags at 350 ml (content 225 ml)	
Freezing time to core temperature of -30°C	21 units (350 ml) ~ 25 min 14 units (1000 ml) ~ 55 min
External dimensions (H x W x D)	1590 x 1460 x 770 mm
Operating temperature (preset), reached within ~ 20 min (pre-cooling phase)	-45°C (upper & lower contact plate)

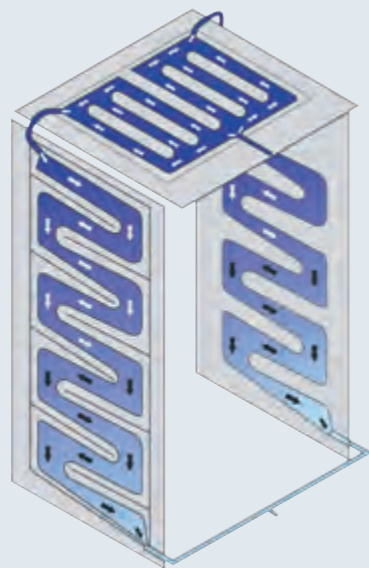
MBF 42



MBF 42	
28 (2 x 14) plasma bags at 1000 ml (content 850 ml)	
42 (2 x 21) plasma bags at 350 ml (content 225 ml)	
Freezing time to core temperature of -30°C	42 units (350 ml) ~ 25 min 28 units (1000 ml) ~ 55 min
External dimensions (H x W x D)	1920 x 2050 x 820 mm
Operating temperature (preset), reached within ~ 20 min (pre-cooling phase)	-45°C (upper & lower contact plate)

Evaporator Technology

Innovative "Rollbond" evaporator technology of the highest grade (stainless steel) for constant temperatures and uniform temperature distribution.



UF 455 G / GG



	G	GG
Gross volume (l)	453	
Net volume (l)	440	
External dimensions H x W x D (mm)	1450 x 910 x 950	
Energy consumption (Kwh/24h)	17.50	12.00
Noise level (dB(A))	59	53

UF 755 G / GG



	G	GG
Gross volume (l)	753	
Net volume (l)	733	
External dimensions H x W x D (mm)	1990 x 910 x 950	
Energy consumption (Kwh/24h)	19.00	13.00
Noise level (dB(A))	60	54

Perfect width and height to fit in every laboratory furniture



ML / MP 135 SG

Refrigerator +5°C with solid / glass door



	ML	MP
Gross volume (l)	135	
Net volume (l)	118	
External dimensions H x W x D (mm)	820 x 560 x 545	
Energy consumption (Kwh/24h)	0.50	0.70
Noise level (dB(A))	38	
	solid door	glass door

LR 110 GG

Refrigerator +4°C with solid door



	LR 110	GG
Gross volume (l)	106	
Net volume (l)	92	
External dimensions H x W x D (mm)	820 x 560 x 580	
Energy consumption (Kwh/24h)	0.75	
Noise level (dB(A))	41	
Available as Internal ☺ II 3 G Ex nA II T6		

PR 110 GG

Refrigerator +4°C with glass door



	PR 110	GG
Gross volume (l)	106	
Net volume (l)	92	
External dimensions H x W x D (mm)	820 x 560 x 580	
Energy consumption (Kwh/24h)	0.75	
Noise level (dB(A))	41	

DFR 110 GG

Freezer -41°C with solid door



	DFR 110	GG
Gross volume (l)	106	
Net volume (l)	104	
External dimensions H x W x D (mm)	820 x 560 x 580	
Energy consumption (Kwh/24h)	4.00	
Noise level (dB(A))	47	
Conform with Internal ☺ II 3 G Ex nA II T6		

BR 110 GG

Refrigerator +4°C with glass door



	BR 110	GG
Gross volume (l)	106	
Net volume (l)	92	
External dimensions H x W x D (mm)	820 x 560 x 580	
Energy consumption (Kwh/24h)	0.75	
Noise level (dB(A))	41	

FR 110 GG

Freezer -41°C with solid door



	FR 110	GG
Gross volume (l)	106	
Net volume (l)	104	
External dimensions H x W x D (mm)	820 x 560 x 580	
Energy consumption (Kwh/24h)	4.00	
Noise level (dB(A))	47	

Built-in and sub-assembly laboratory / pharmaceutical refrigerators and deep freezers for preserving temperature-sensitive products

B Medical Systems offers seven models of refrigerators and freezers that can be built in or under laboratory furniture. The dimensions fit perfectly for these needs and the cooling/ freezing appliance can be practically integrated in a space-saving way in your workplace.

Thanks to their advantageous dimensions and design the models BR 110 GG, DFR 110 GG, FR 110 GG, LR 110 GG und PR 110 GG are usable as either the stand alone version or the built-in / sub-assembly version.



Transport Systems for the safe transport of blood bags

The model range MT consists of four passive transport systems supplemented efficiently by a fast freezer for cooling elements and two active transport boxes, working with the Peltier system or with a compressor.

B Medical Systems transport systems are ideal for intensive use with many transport applications, even under difficult climatic conditions.

MT models are 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).

MT 4 B



MT 4 B	
Passive	
Gross volume (l)	8
Storage cap. (blood bags)	4 at 450 ml
	6 at 270 ml
Ext. dimensions H x W x D (mm)	299 x 362 x 283

MT 8 B



MT 8 B	
Passive	
Gross volume (l)	20
Storage cap. (blood bags)	8 at 450 ml
	14 at 270 ml
Ext. dimensions H x W x D (mm)	437 x 588 x 288

MT 12 E



MT 12 E	
Passive	
Gross volume (l)	24
Storage cap. (blood bags)	15 at 450 ml
	25 at 270 ml
Ext. dimensions H x W x D (mm)	499 x 550 x 475

MT 25 E



MT 25 E	
Passive	
Gross volume (l)	44
Storage cap. (blood bags)	26 at 450 ml
	40 at 270 ml
Ext. dimensions H x W x D (mm)	499 x 710 x 550



MT 100



MT 100	
Active (Compressor)	
Gross volume (l)	90
Storage cap. (blood bags)	48 at 450 ml
Ext. dimensions H x W x D (mm)	1000 x 520 x 800
Application range (amb. temp.)	-2°C at +43°C

MT 900

Waterpack Freezer

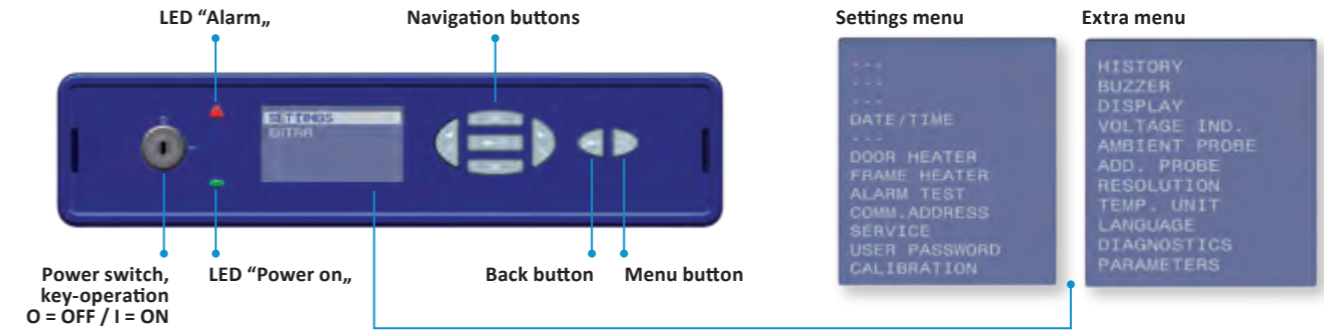


MT 900	
Active (Compressor)	
Gross volume (l)	290
Storage cap. (Ice-pack)	187 x 0.6 L
Ext. dimensions H x W x D (mm)	1830 x 595 x 725
Application range (amb. temp.)	+16°C at +43°C

B Medical Systems Electronic

The new and innovative B Medical Systems Electronic (operation and control panel) assures thanks to its password protected settings menu optimum protection for your stored preparations.

The menu structure of the modern and user-friendly graphic display offers a simple and intuitive utilization.



The new B Medical Systems Electronic also 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).
- > An optional PT 100 sensor inlet to show the sensor's temperature data on the display as well as forwarding and further processing via a 4 ... 20 miliA outlet.
- > An optional 20 miliA outlet to transmit temperature data of a sensor connected to the electronic.
- > Connection facilities for additional (optional) temperature sensors.
- > DMN (Data Monitoring Network) and the (optional) DCU (Data Communication Unit) allows illustration of texts on the product's display.

Touchscreen display

> For Gold models BR / DFR / FR / LR / PR 250 – 750 G / GG (except models 110 GG), UF 455 & 755 G / GG and MF 755 GG

The new B Medical Systems Touchscreen display offers a lot of individual configuration possibilities. According to your professional needs, data, events and activities can be displayed and analyzed in detail.



Main features :

- > 7" touchscreen display
- > Clear and user-friendly
- > With temperature graphs (1 year history)
- > Different user profiles (with access to different areas) & Multi-Language user interface
- > Event history (for the 300 last events) keeps track on all events occurred during operations (like door openings, warnings and alarms)
- > All data can be exported to USB storage devices



BR 410 GG
with touchscreen display



High temperature alarm

- > The alarm messages are displayed in red characters in the main area, just below the temperature display.
- > The acoustic alarm can be suppressed for a predefined time by pressing the „mute“ button.



Trend display

- > Possibility to display actual and historical temperature values in graphic format, with legend of the charts.
- > Temperature charts can be exported in cvs-format to USB stick.

DMN - Data Monitoring Network

Universal software for collection, long-term recording and visualization of temperature data.

- > Complete activity list (password protected).
- > Integrated event and activity history of all appliance components.
- > Graphical visualisation of all temperature curves.
- > Connection to existing or third-party appliances via network technology (LAN, WLAN, WAN).
- > Simultaneous data monitoring and recording.
- > Possibility for specific and individually configurable alarm forwardings, e. g. via email, SMS (with optional GSM module) or via DECT.
- > Simple and intuitive utilization.
- > Essential price advantage compared to a traditional circular chart recorder and its spare parts.
- > Free of charge for all Gold & Silver ranges.

- > Real-time temperature output for third-party software.

Your essential advantages :

- Access to the data within your entire network via one central database.
- Economy of time and money as regular changes of recorder paper, ink and battery is not necessary.



DCU - Data Communication Unit

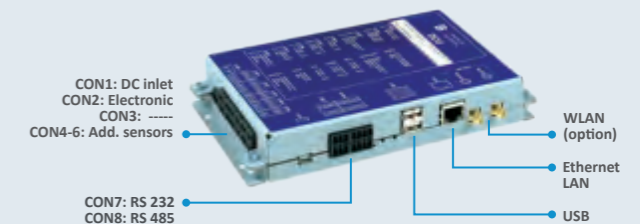
Hardware module that notes all operating conditions and passes them through to a central data base – via local network, on which devices are connected.

- > Interface connection of B Medical Systems appliances to an existing network.
- > The DCU offers direct connection to the Ethernet, even wireless, to the serial BUS RS 485, as well as to the central building control system (4 ... 20 mA).
- > Possibility of connection of actors (4 ... 20 mA out).
- > Digital IN/OUT (customer-specific use of these connections is programmable).
- > The integrated USB port allows stored data to be written to an external memory stick.
- > Recording and storage of relevant data of the appliance.
- > The DCU replaces the paper temperature recorder.
- > The DCU works with all Gold electronics from 2000 on.
- > All data are recorded and saved in the data base of the DMN and are available for analysis at any time.

- > Possibility of connection of several additional self-sufficient temperature sensors (up to 4 PT1000 & 2 PT100).

Your essential advantages :

- One integrative system for collecting all temperature relevant appliances and ambients.
- Many different connection facilities allow flexible upgrades for individual projects.



DMN & DCU in combination offer a highly flexible system that is adaptable to specific customer requirements

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



B Medical Systems

Your global partner to save lives.



BIOMEDICAL REFRIGERATION

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



BLOOD SAFETY

For a reliable cold chain within the scope of safety of blood transfusions.



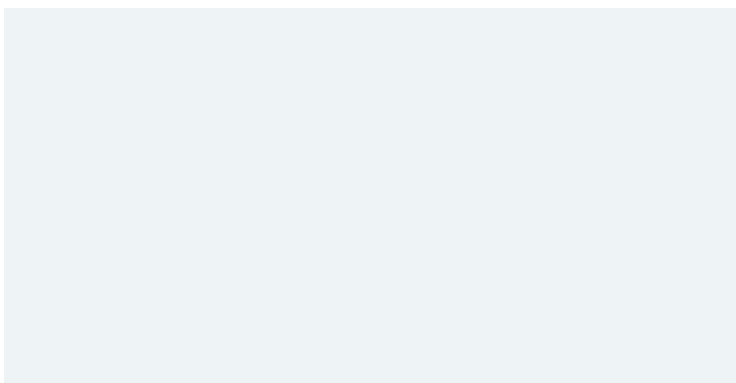
COLD CHAIN

Comprehensive range of storage and active / passive transport systems for the storage and distribution of vaccines and in general of all temperature-sensitive preparations under various climatic and technical conditions.



BLOOD CHAIN

Storage and active / passive transport systems dedicated to the military for the supply of blood, vaccines and medicines to the front line.



For more information :

B Medical Systems S.à r.l.

17, Op der Hei

L - 9809 Hosingen, Luxembourg

Tel. : + 352 92 07 31-1

Fax : + 352 92 07 31-300

info@bmedicalsistemas.com

www.bmedicalsistemas.com