



TECHNOLOGY FOR LIFE

 **Dometic**



MEDICAL SYSTEMS

Technology for Life

- BIOMEDICAL REFRIGERATION
- BLOOD SAFETY
- BIOTECH SYSTEMS

www.dometic.lu

Dometic Medical Systems – Technology for life

The division “Medical Systems” of Dometic S.à r.l. is specialized in research, development and manufacturing of professional refrigerators & deep freezers, storage & transport concepts, high quality instruments & equipment for laboratories, medicine, research, biotechnology and Life Science.

Dometic places its expertise in medical refrigeration and its excellent knowledge of user needs at the service of humanity. The results is the concept “Technology for life” which has determined the development of the “Medical Systems” product range.

Our expertise in this area goes back to the year 1979, when the product range “Cold Chain” was selected by the international health organization to ensure the effectiveness of the cold chain for vaccines worldwide.

Since then Dometic Medical Systems has established a worldwide distribution network and is nowadays recognized as a reliable and professional partner in the medical world. It has a history of close co-operation with prestigious international organizations, institutions and companies.

Dometic focuses on the client’s absolute right to precision, reliability, durability, functionality and design, with easy access to support, service and training.

We are committed to high quality, safety, compliance to standards and are environmentally responsible.



**BIOMEDICAL
REFRIGERATION**

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BIOMEDICAL REFRIGERATION

Innovative and reliable refrigeration solutions

Dometic'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.

Dometic Safety and Green Standards

For technical reliability and environmental friendliness

Biomedical refrigerators, freezers and transport systems

For any cooling need in laboratories, research, biotechnology

Dometic Electronic & Software

For optimum control and protection of your preparations

Comprehensive accessories program

Please contact us to know more about our wide range of drawers, shelves and racks



Gold & Silver Safety Standards

The Safety Standards developed by Dometic 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 Dometic Silver Safety Standard ensures the reliable and safe operation of all Dometic refrigerators and deep freezers. Safety for the stored preparations and the user. Silver models are denominated with a "S".

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



Dometic Electronic ¹	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety door lock with 2 keys	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Key-operated power switch (power ON/OFF) with 2 keys	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Power indicator light	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Digital temperature indicator (display: 0.1 digits)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Controlled fan cooling system for constant temperature and even temperature distribution across the entire refrigerating chamber. Automatic switch-off when front door opens ²	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Acoustic and visual alarm signal in case of temperature alarm and power failure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Remote transmission alarm signal (via potential-free contact) in case of temperature alarm (change-over contact)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Control via self-diagnostic system	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety thermostat prevents dropping of the cold storage product's temperature below +2°C ³	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Door opening alarm (visual / acoustic)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Designed and tested for climatic class SN / T (ambient temperature range +10°C to +43°C) ⁴	<input checked="" type="checkbox"/>	-
Designed and tested for climatic class SN (ambient temperature range +10°C to +32°C) ⁸	-	<input type="checkbox"/>
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	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Interior made from stainless steel	<input checked="" type="checkbox"/>	-
Internal LED lighting ⁶	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Smooth castors for optimum flexibility of movement ⁵	<input checked="" type="checkbox"/>	-
GMP Clean Room Classification for free standing installation: in clean rooms of GMP A / ISO 5 (ISO EN 14644-1) ⁷	<input checked="" type="checkbox"/>	-
GMP Clean Room Classification for free standing installation: in clean rooms of GMP B / ISO 6 (ISO EN 14644-1)	-	<input type="checkbox"/>
Additional remote transmission alarm signal (via potential-free contact) in case of power failure (change-over contact)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
External water cooling ⁵	<input type="checkbox"/>	-
DMN - Dometic Monitoring Network ¹	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ambient temperature sensor	<input type="checkbox"/>	<input type="checkbox"/>
DCU - Dometic Communication Unit	<input type="checkbox"/>	<input type="checkbox"/>

standard optional - not available

¹ Not for underbench models ML / MP 135 SG

² Not for models UF 455 G/GG & UF 755 G/GG, FR 110 GG and MF 110 SG/ 250 S

³ For refrigerators

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

⁵ Not for models BR/ FR/ LR/ PR 110 G/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)



Green light for real sustainable cooling technology

Dometic Medical Systems' concept "Technology for life" 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.

Dometic 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 ■ ■).	

BR range



BR 110 G/G6

BR 250 G/G6

BR 410 G/G6

BR 490 G/G6

BR 750 G/G6

Refrigerators for the legally safe storage of blood bags / erythrocyte concentrates at +4°C (according to DIN 58371 & ÖNORM K 2030)

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 glass door for quick check and pre-selection of the refrigerator's content.

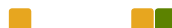
The transparent front panel of the ST-Drawers, which are part of the standard equipment of the BR models, minimize cold losses when the door is opened.

Models BR 250 G – 750 G are available as 220-240 V (50/60 Hz) and 115 V (60 Hz) version, model BR 110 G only as 115 V (60 Hz) type. All green models exist as 220-240 V (50 Hz) version.



Blood Bank Refrigerators I +4°C

BR 110 G / GG



	BR 110 G	BR 110 GG
External dimensions (mm)	820 x 560 x 580	
Gross volume (l)	106	
Net volume (l)	92	
Storage capacity (blood bags)	54 at 450 ml each 72 at 350 ml each	
Energy consumption (Kwh/24h)	1.25	0.75 (40 % less)
Noise level (dB(A))	41	

BR 250 G / GG



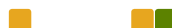
	BR 250 G	BR 250 GG
External dimensions (mm)	1305 x 850 x 785	
Gross volume (l)	246	
Net volume (l)	167	
Storage capacity (blood bags)	120 at 450 ml each 160 at 350 ml each	
Energy consumption (Kwh/24h)	1.50	0.95 (37 % less)
Noise level (dB(A))	49	42

BR 410 G / GG



	BR 410 G	BR 410 GG
External dimensions (mm)	1735 x 850 x 785	
Gross volume (l)	408	
Net volume (l)	319	
Storage capacity (blood bags)	240 at 450 ml each 320 at 350 ml each	
Energy consumption (Kwh/24h)	1.70	1.00 (41 % less)
Noise level (dB(A))	51	42

BR 490 G / GG



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

BR 750 G / GG



	BR 750 G	BR 750 GG
External dimensions (mm)	1990 x 910 x 985	
Gross volume (l)	746	
Net volume (l)	620	
Storage capacity (blood bags)	450 at 450 ml each 550 at 350 ml each	
Energy consumption (Kwh/24h)	2.00	1.20 (40 % less)
Noise level (dB(A))	51	42

ML (solid door range)



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 1301 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 Dometic Silver Safety Standard these models ensure a reliable and safe operation.



MP (glass door range)



Laboratory / Medicine / Pharmaceutical Refrigerators I +5°C

ML / MP 155 S^G



fig. MP 155 S^G



	ML 155 S ^G / MP 155 S ^G	
External dimensions (mm)	900 x 595 x 630/605	
Gross volume (l)	155	
Net volume (l)	141	
Energy consumption (Kwh/24h)	0.54	0.76
Noise level (dB(A))	41	41
ML 155 S ^G available as Internal II 3 G EEx nA II T6		

ML / MP 320 S



fig. MP 320 S



	ML 320 S / MP 320 S	
External dimensions (mm)	1830 x 595 x 605	
Gross volume (l)	322	
Net volume (l)	274	
Energy consumption (Kwh/24h)	1.10	1.60
Noise level (dB(A))	42	42
ML 320 S available as Internal II 3 G EEx nA II T6		

ML / MP 355 S



fig. MP 355 S



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

ML / MP 360 CS



fig. MP 360 CS



	ML 360 CS / MP 360 CS	
External dimensions (mm)	2030 x 595 x 605	
Gross volume (l)	357	
Net volume (l)	324	
	Refrigerator	Freezer
Energy consumption (Kwh/24h)	1.10 / 1.38	2.60
Noise level (dB(A))	42	43

ML / MP 580 S



fig. MP 580 S



	ML 580 S / MP 580 S	
External dimensions (mm)	1980 x 750 x 800	
Gross volume (l)	578	
Net volume (l)	518	
Energy consumption (Kwh/24h)	3.00	3.50
Noise level (dB(A))	47	47

ML / MP 1300 S



fig. MP 1300 S



	ML 1300 S / MP 1300 S	
External dimensions (mm)	1980 x 1500 x 800	
Gross volume (l)	1301	
Net volume (l)	1183	
Energy consumption (Kwh/24h)	3.10	5.50
Noise level (dB(A))	50	50

LR (solid door range)



LR 110 G/GG

LR 250 G/GG

LR 410 G/GG

LR 490 G/GG

LR 750 G/GG

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

The product range PR/LR 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 Dometic Gold Safety Standard these models even exceed official safety standards.

Models PR/LR 250 G – 750 G are available as 220-240 V (50/60 Hz) and 115 V (60 Hz) version, models PR and LR 110 G only as 115 V (60 Hz) type. All green models exist as 220-240 V (50 Hz) version.



PR (glass door range)



PR 110 G / GG

PR 250 G/GG

PR 410 G/GG

PR 490 G/GG

PR 750 G/GG

Laboratory / Medicine / Pharmaceutical Refrigerators I +4°C

LR / PR 110 G / GG



fig. PR 110 G / GG

	LR / PR 110 G	LR / PR 110 GG
External dimensions (mm)	820 x 560 x 580	
Gross volume (l)	106	
Net volume (l)	92	
Energy consumption (Kwh/24h)	1.15 / 1.25	0.75 (35 / 40% less)
Noise level (dB(A))	41	
LR 110 GG available as Internal I 3 G EEx nA II T6		

LR / PR 250 G / GG



fig. PR 250 G/GG

	LR/PR 250 G	LR/PR 250 GG
External dimensions (mm)	1305 x 850 x 785	
Gross volume (l)	246	
Net volume (l)	167	
Energy consumption (Kwh/24h)	1.40 / 1.50	0.90 / 0.95 (36 / 37% less)
Noise level (dB(A))	49	42

LR / PR 410 G / GG



fig. PR 410 G/GG

	LR/PR 410 G	LR/PR 410 GG
External dimensions (mm)	1775 x 850 x 785	
Gross volume (l)	408	
Net volume (l)	319	
Energy consumption (Kwh/24h)	1.60 / 1.70	0.95 / 1.00 (41% less)
Noise level (dB(A))	51	42

LR / PR 490 G / GG



fig. PR 490 G/GG

	LR/PR 490 G	LR/PR 490 GG
External dimensions (mm)	1950 x 850 x 785	
Gross volume (l)	489	
Net volume (l)	395	
Energy consumption (Kwh/24h)	1.80 / 1.90	1.00 / 1.10 (44 / 42% less)
Noise level (dB(A))	51	42
LR 490 G/GG available as Internal I 3 G EEx nA II T6		

LR / PR 750 G / GG



fig. PR 750 G/GG

	LR/PR 750 G	LR/PR 750 GG
External dimensions (mm)	1990 x 910 x 985	
Gross volume (l)	746	
Net volume (l)	620	
Energy consumption (Kwh/24h)	1.90 / 2.00	1.10 / 1.20 (42 / 40% less)
Noise level (dB(A))	51	42

FR/MF range



Freezers for the low-temperature storage of plasma and other substances under optimum conditions (according to DIN 58375)

Dometic'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 G – 750 G are available as 220-240 V (50 Hz) and 115 V (60 Hz) version, model FR 110 G only as 115 V (60 Hz) type. The green model FR 110 GG as well as the MF models exist as 220-240 V (50 Hz) version.



FR 110 G / GG



FR 250 G



FR range
FR models comply with the Dometic Gold Safety Standard and even exceed official safety standards.

	FR 110 G	FR 110 GG
External dimensions (mm)	820 x 560 x 580	
Gross volume (l)	106	
Net volume (l)	104	
Storage capacity (plasma bags)	54 at 450 ml each 72 at 350 ml each	
Energy consumption (Kwh/24h)	pending	4,00
Noise level (dB(A))	pending	47

	FR 250 G
External dimensions (mm)	1305 x 850 x 785
Gross volume (l)	246
Net volume (l)	167
Storage capacity (plasma bags)	120 at 450 ml each 160 at 350 ml each
Energy consumption (Kwh/24h)	6,10
Noise level (dB(A))	58

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

FR 410 G



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

FR 490 G



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

FR 750 G



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

MF 110 SG



	MF 110 SG
External dimensions (mm)	900 x 595 x 630
Gross volume (l)	110
Net volume (l)	104
Storage capacity (plasma bags)	69 at 450 ml each 69 at 350 ml each
Energy consumption (Kwh/24h)	1.70
Noise level (dB(A))	41
Conform with Internal	II 3 G EEx nA II T6

MF 250 S



	MF 250 S
External dimensions (mm)	1830 x 595 x 605
Gross volume (l)	247
Net volume (l)	228
Storage capacity (plasma bags)	168 at 450 ml each 168 at 350 ml each
Energy consumption (Kwh/24h)	2.50
Noise level (dB(A))	44
Conform with Internal	II 3 G EEx nA II T6

MF range

Being in conformity with the Dometic Silver Safety Standard MF models always ensure a reliable and safe operation.



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.

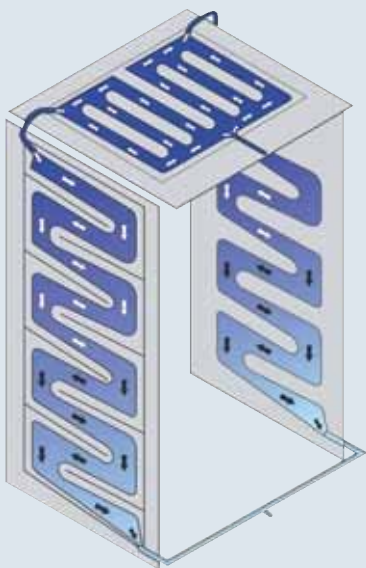
The cooling system is optimally designed with respect to energy consumption as well as to the development of waste heat and noise.

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).



Evaporator Technology

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



UF 455 G / GG



	UF 455 G	UF 455 GG
External dimensions (mm)	1450 x 910 x 950	
Gross volume (l)	453	
Net volume (l)	440	
Storage capacity (plasma bags)	270 at 450 ml each 330 at 350 ml each	
Energy consumption (Kwh/24h)	17,50	12,00 (31% less)
Noise level (dB(A))	59	53

UF 755 G / GG



	UF 755 G	UF 755 GG
External dimensions (mm)	1990 x 910 x 950	
Gross volume (l)	753	
Net volume (l)	733	
Storage capacity (plasma bags)	450 at 450 ml each 550 at 350 ml each	
Energy consumption (Kwh/24h)	19,00	13,00 (32% less)
Noise level (dB(A))	60	54

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

Dometic'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 500 ml (content 450 ml)

Freezing time to core temperature of -30°C	12 units (500 ml) ~ 40 min
	8 units (1000 ml) ~ 55 min

Operating temperature (preset), reached within ~ 20 min (pre-cooling phase)	-50°C (upper & lower contact plate)
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External dimensions (mm)	1600 x 970 x 770
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MBF 21



MBF 21

14 plasma bags at 1000 ml (content 850 ml)

21 plasma bags at 500 ml (content 450 ml)

Freezing time to core temperature of -30°C	21 units (500 ml) ~ 40 min
	14 units (1000 ml) ~ 55 min

Operating temperature (preset), reached within ~ 20 min (pre-cooling phase)	-50°C (upper & lower contact plate)
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External dimensions (mm)	1600 x 1470 x 770
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MBF 42



MBF 42

28 (2 x 14) plasma bags at 1000 ml (content 850 ml)

42 (2 x 21) plasma bags at 500 ml (content 450 ml)

Freezing time to core temperature of -30°C	42 units (500 ml) ~ 40 min
	28 units (1000 ml) ~ 55 min

Operating temperature (preset), reached within ~ 20 min (pre-cooling phase)	-50°C (upper & lower contact plate)
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External dimensions (mm)	1920 x 1900 x 770
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Built-in & Sub-assembly Models

Perfect width and height to fit in every laboratory furniture



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

Dometic Medical Systems offers six 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 G/G_G, FR 110 G/G_G, LR 110 G/G_G and PR 110 G/G_G are usable as either the stand alone version or the built-in/sub-assembly version. Models ML/MP 135 S_G can optionally be equipped with side walls and cover in order to get a stand alone type.



ML 135 SG



	ML 135 SG
External dimensions (mm)	820(825*) x 560 x 545(585*)
Gross volume (l)	135
Net volume (l)	118
Energy consumption (Kwh/24h)	0.50
Noise level (dB(A))	38

* stand-alone version

MP 135 SG



	MP 135 SG
External dimensions (mm)	820(825*) x 560 x 545(585*)
Gross volume (l)	135
Net volume (l)	118
Energy consumption (Kwh/24h)	0.70
Noise level (dB(A))	38

* stand-alone version

BR 110 G / GG



	BR 110 G	BR 110 GG
External dimensions (mm)	820 x 560 x 580	
Gross volume (l)	106	
Net volume (l)	92	
Energy consumption (Kwh/24h)	1.25	0.75 (40 % less)
Noise level (dB(A))	41	

FR 110 G / GG



	FR 110 G	FR 110 GG
External dimensions (mm)	820 x 560 x 580	
Gross volume (l)	106	
Net volume (l)	104	
Energy consumption (Kwh/24h)	pending	4,00
Noise level (dB(A))	pending	47

LR 110 G / GG



	LR 110 G	LR 110 GG
External dimensions (mm)	820 x 560 x 580	
Gross volume (l)	106	
Net volume (l)	92	
Energy consumption (Kwh/24h)	1.15	0.75 (35% less)
Noise level (dB(A))	41	

LR 110 GG available as Internal II 3 G EEx nA II T6

PR 110 G / GG



	PR 110 G	PR 110 GG
External dimensions (mm)	820 x 560 x 580	
Gross volume (l)	106	
Net volume (l)	92	
Energy consumption (Kwh/24h)	1.25	0.75 (40% less)
Noise level (dB(A))	41	

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 six active transport boxes, working with the Peltier system or with a compressor.

Dometic 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 , $+4^{\circ}\text{C}$, $+22^{\circ}\text{C}$ and $+37^{\circ}\text{C}$).

MT 4 B



MT 4 B	
Passive	
Dimensions (mm)	301 x 363 x 287
Gross volume (l)	8
Storage capacity (blood bags)	4 at 450 ml each 6 at 270 ml each

MT 8 B



MT 8 B	
Passive	
Dimensions (mm)	435 x 590 x 290
Gross volume (l)	20
Storage capacity (blood bags)	8 at 450 ml each 14 at 270 ml each

MT 12 E



MT 12 E	
Passive	
Dimensions (mm)	500 x 550 x 470
Gross volume (l)	24
Storage capacity (blood bags)	15 at 450 ml each 25 at 270 ml each

MT 25 E



MT 25 E	
Passive	
Dimensions (mm)	500 x 710 x 550
Gross volume (l)	44
Storage capacity (blood bags)	26 at 450 ml each 40 at 270 ml each

MT 42 P



MT 42 P	
Active (Peltier)	
Dimensions (mm)	500 x 840 x 550
Gross volume (l)	43
Storage capacity (blood bags)	30 at 450 ml each 50 at 270 ml each
Application range (amb. temp.)	-32°C to $+43^{\circ}\text{C}$

MT 100



MT 100	
Active (Compressor)	
Dimensions (mm)	1000 x 520 x 800
Gross volume (l)	90
Storage capacity (blood bags)	48 at 450 ml each
Application range (amb. temp.)	-2°C to 43°C

MT 900



MT 900	
Active (Compressor icepack freezer)	
Dimensions (mm)	1805 x 595 x 720
Gross volume (l)	247
Storage capacity	179 cooling elements at 0,6 each
Application range (amb. temp.)	16°C to 43°C

MT 18



MT 18	
Active (Compressor)	
Dimensions (mm)	414 x 465 x 300
Gross volume (l)	18
Storage capacity (blood bags)	6 at 450 ml each 8 at 270 ml each
Application range (amb. temp.)	+5°C to +32°C

MT 50



MT 50	
Active (Compressor)	
Dimensions (mm)	480 x 630 x 360
Gross volume (l)	49
Storage capacity (blood bags)	14 at 450 ml each 18 at 270 ml each
Application range (amb. temp.)	+5°C to +32°C

MT 80



MT 80	
Active (Compressor)	
Dimensions (mm)	455 x 790 x 500
Gross volume (l)	80
Storage capacity (blood bags)	27 at 450 ml each 36 at 270 ml each
Application range (amb. temp.)	+5°C to +32°C

MT 110

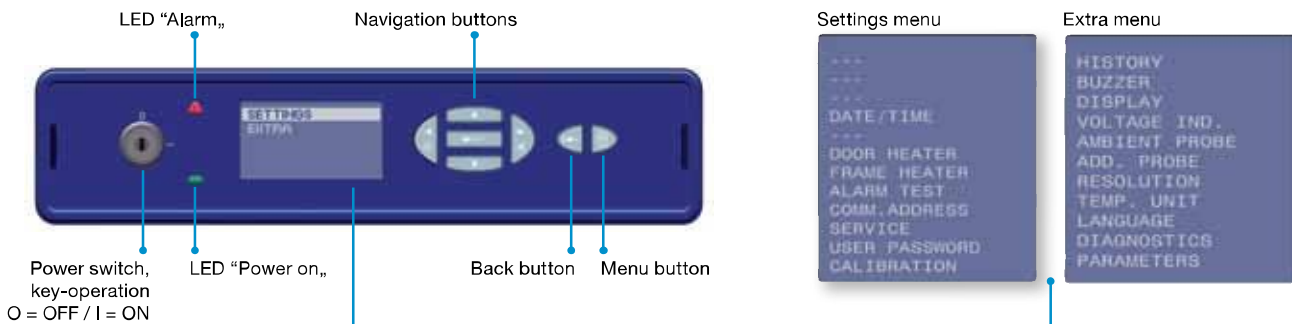


MT 110	
Active (Compressor)	
Dimensions (mm)	555 x 790 x 500
Gross volume (l)	106
Storage capacity (blood bags)	36 at 450 ml each 48 at 270 ml each
Application range (amb. temp.)	+5°C to +32°C

Dometic Electronic

The new and innovative Dometic 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 Dometic 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 mA outlet.
- An optional 4...20 mA outlet to transmit temperature data of a sensor connected to the electronic (see picture).
- Connection facilities for additional (optional) temperature sensors.
- DMN (Dometic Monitoring Network) and the (optional) DCU (Dometic Communication Unit) allows illustration of texts on the product's display.



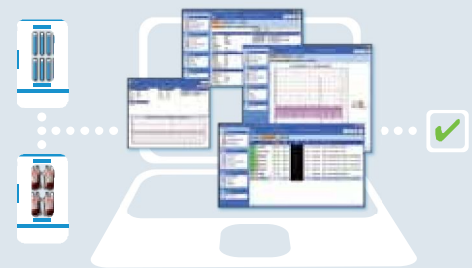
DMN – Dometic Monitoring Network

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 Dometic 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 or battery are not necessary.



DCU – Dometic Communication Unit

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

- Interface connection of Dometic 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 milliA).
 - Possibility of connection of actuators (4 ... 20 milliA 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.

CON1: DC inlet
CON2: Electronic
CON3: ———
CON4-6: Add. sensors
CON7: 4-20mA / RS 232
CON8: RS 485



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



Blood Safety

Global Safe Blood Management

Ensuring a safe and secure supply of blood and blood products, as well as the appropriate and rational use, are important public health responsibilities of every nation and government.

“Blood Safety” comprises different activities from collection to transfusion.

Blood Traceability

RFID technology for a complete traceability and identification of RBCCs

Blood Cold Chain

A selected range of products for an uninterrupted and precisely temperature controlled blood cold chain



Global Haemovigilance at a glance

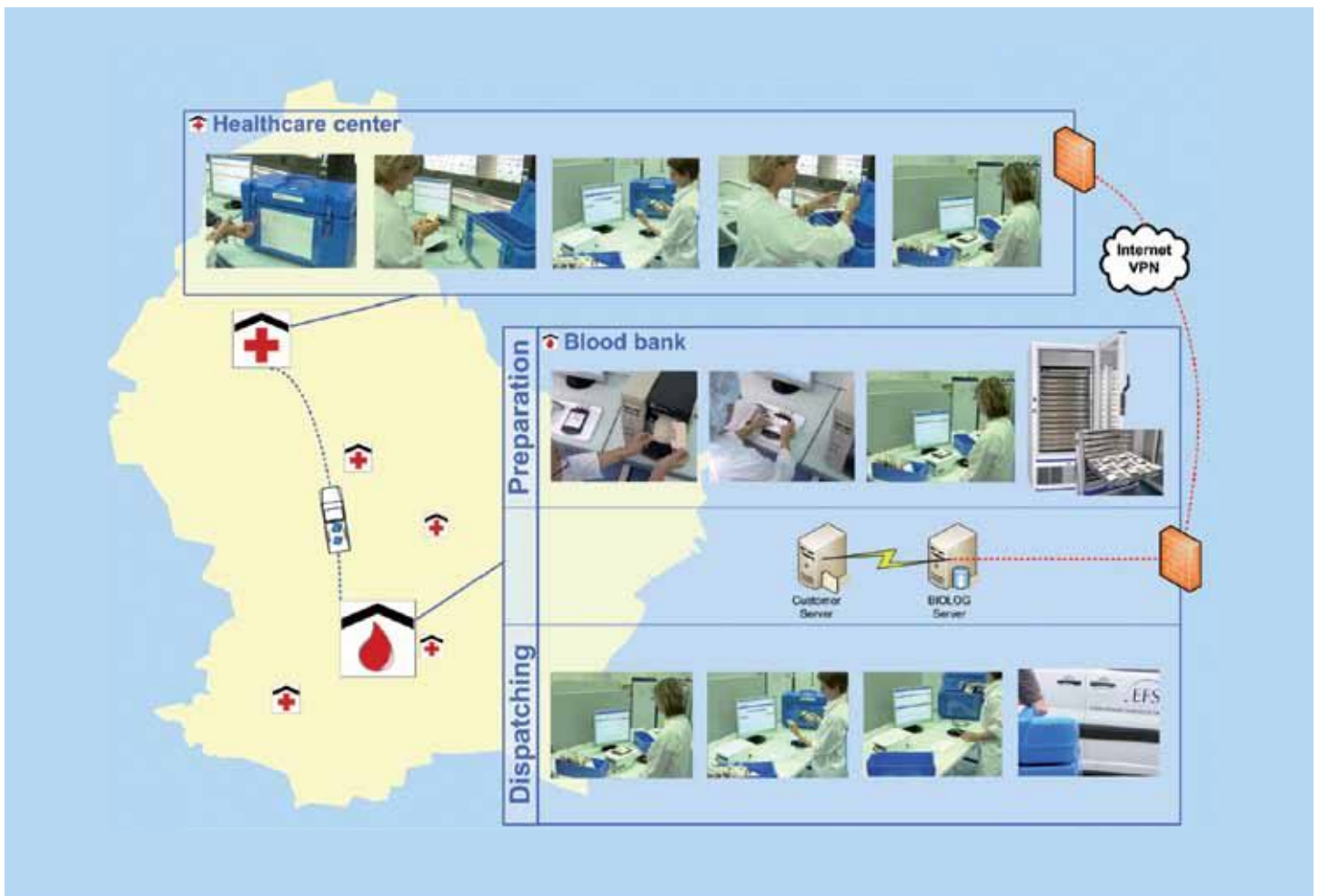
The newly developed Blood Traceability system “Biolog” with RFID chips integrated into the blood bags label provides a complete traceability and identification of RBCC's and avoids retranscription errors. It is a computerised management system of the transfusion chain and its main advantages are:

- Perfect Cold Chain surveillance
- Rationalised distribution of blood bags
- Global management of national stock
- Guarantee against transfusion errors

The “Dometric powered by Biolog” solution is the first global traceability system covering all life cycles of the blood bag.

RFID (Radio Frequency Identification) is now ready for today's blood transfusion. The Dometric RFID system “Biolog” offers you all the necessary hardware and software from donor to receiver : **Physical traceability, cold chain surveillance, automatic stock management (FIFO), stock optimization, electronic cross matching between donor and receiver, clinical data registration, transfer of data between sites and elimination of human errors.**

Interactions within the BIOLOG solution



The RFID donor card manages all donor data nationwide and even across borders if wished. Once the donation occurs the RFID label will allow at all times the monitoring and management of all clinical information, transport and storage temperatures and conditions, destination and receiver information. The system fully assists the dispatching phase with the search for a specific blood bag and the elimination of human error. True stock is constantly monitored and managed in real time with automatic optimization of thresholds, expiry dates and choice of products.

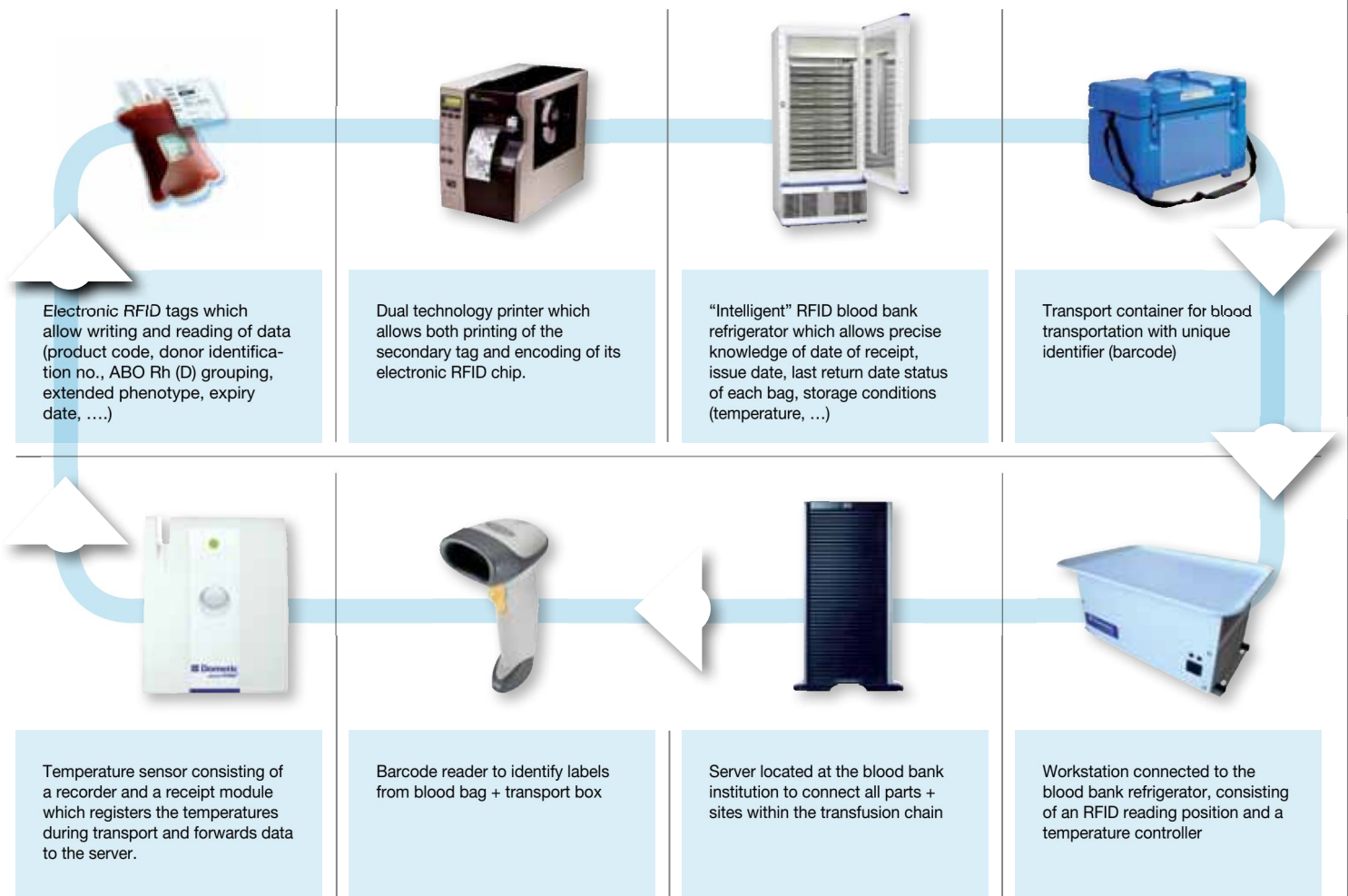
The RBC bag is at all times within an intelligent transport container or intelligent blood refrigerator allowing each bag to carry its own history from donor to receiver. Upon arrival at the healthcare centre all data is downloaded and transferred automatically avoiding any transcription error. Prior to transfusion an electronic crossmatch can

be made between the RFID label on the bag and the RFID bracelet from the receiver avoiding crossmatching errors.

When a bag is delivered but not transfused a remote secure and controlled reallocation can be done through the system without physically moving the RBC bag, allowing optimal use of existing stock.



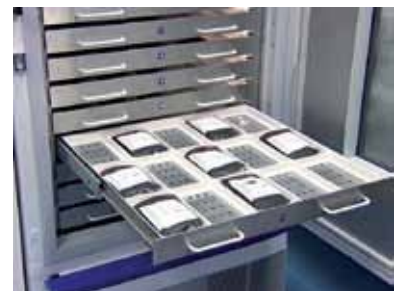
Biolog Hardware





BR 490 G Biolog

Each blood bag is equipped with a RFID chip that registers all relevant transfusion data.



Each drawer has RFID detectors for every cell in order that all blood bags are individually identified and supervised.

Intelligent blood refrigerators for a consistent tracing of blood bags

Dometic Medical Systems has adapted four of its blood refrigerators for the Biolog solution. RFID detectors for each drawer level observe the presence or movement of the blood bags in the different cells of the drawers.



Dometic Intelligent Blood Bank Refrigerators BR I +4°C

BR 250 G



	BR 250 G
External dimensions (mm)	1305 x 850 x 785
Gross volume (l)	246
Net volume (l)	167
Storage capacity (blood bags)	32
Energy consumption (Kwh/24h)	1.50
Noise level (dB(A))	49

BR 410 G



	BR 410 G
External dimensions (mm)	1735 x 850 x 785
Gross volume (l)	408
Net volume (l)	319
Storage capacity (blood bags)	80
Energy consumption (Kwh/24h)	1.70
Noise level (dB(A))	51

BR 490 G



	BR 490 G
External dimensions (mm)	1950 x 850 x 785
Gross volume (l)	489
Net volume (l)	395
Storage capacity (blood bags)	104
Energy consumption (Kwh/24h)	1.90
Noise level (dB(A))	51

BR 750 G



	BR 750 G
External dimensions (mm)	1990 x 910 x 985
Gross volume (l)	746
Net volume (l)	620
Storage capacity (blood bags)	210
Energy consumption (Kwh/24h)	2.00
Noise level (dB(A))	51



Biolog temperature logger

The Biolog temperature logger records the temperature of the RBCC's continuously (Integrated to the MT Boxes).



The temperature logger is read before and after transportation to have always most actual data.

Before every transportation the battery of the logger is automatically verified.

fig. MT 8 B

Blood boxes for a safe traceability of blood bags during transport

Dometic Medical Systems Transport Boxes are an essential link within the Biolog solution. The temperature logger always ensures perfect temperature-controlled conditions during transport. The quality of the transported blood bags is not left to chance.

MT 4 B



MT 4 B	
Passive	
External dimensions (mm)	301 x 363 x 287
Gross volume (l)	8
Storage capacity (blood bags)	4 at 450 ml each
	6 at 270 ml each

MT 8 B



MT 8 B	
Passive	
External dimensions (mm)	435 x 590 x 290
Gross volume (l)	20
Storage capacity (blood bags)	8 at 450 ml each
	14 at 270 ml each

MT 12 E



MT 12 E	
Passive	
External dimensions (mm)	500 x 550 x 470
Gross volume (l)	24
Storage capacity (blood bags)	15 at 450 ml each
	25 at 270 ml each

MT 25 E



MT 25 E	
Passive	
External dimensions (mm)	500 x 710 x 550
Gross volume (l)	44
Storage capacity (blood bags)	26 at 450 ml each
	40 at 270 ml each

Periphery

**Blood Collection
at Peripheral Centres**



**Storage
at Peripheral Centres
UF / FR / BR**

Transport

**Transport of
Unscreened Blood / Plasma
to Technical Platform**



**Transport of Screened Blood / Plasma
to Peripheral Centres
MT**



“Ensuring a safe, secure and ethical supply of blood and blood products and the appropriate and rational clinical use of blood are important public health responsibilities of every national government. A prerequisite for blood safety is the existence of a national blood transfusion system, based on voluntary non-remunerated donation and with every aspect governed by quality management. Such systems should be nationally coordinated, financially sustainable and able to respond to any newly emerging blood safety threat”.*

Blood Cold Chain is one key component for Blood Safety and comprises different activities involving equipment that need to offer perfect storage and transport from the beginning (collection) to the end (transfusion). Blood is collected at a body temperature (~ 37°C), to keep it safe and to avoid bacterial contamination it has to be cooled and stored between +2°C and +6°C, with a set point of +4°C (for a period of around 35 days of storage).

Technical Platform

Storage of
Unscreened
Blood

Screening,
Testing,
Processing

Production



BR



BR



FR / UF

Blood

Plasma



ML



Red Cells

Plasma



Storage of Screened
Blood / Plasma

Contact Shock
Freezing Plasma
MBF

"Plasma components must be shock frozen below -30°C within a short period of time and stored at temperatures that will adequately maintain the labile coagulation factors in a functional state (for a period around 24 months when stored below -25°C and 3 months at -18°C to -25°C)".*

We evaluate that around 7%** of the collected blood for transfusion needs can be wasted for different reasons (the main one is due to missing traceability). To decrease this percentage during the blood cold chain, Dometic Medical Systems has developed a range of different products with strong safety standards. Blood

units are often lost during the transport from the blood bank to the hospital and inside these buildings. Too often, ordinary untested cold boxes which are unable to maintain the cold life on a long distance and period are responsible for significant waste.

A perfect effective blood cold chain is only available with tested and technically proven products, which respect international norms and follow WHO tested specifications.

So it is with Dometic medical products.

*Statement from WHO / ** Figures from WHO



Biotech Systems Secure Life Sciences solutions

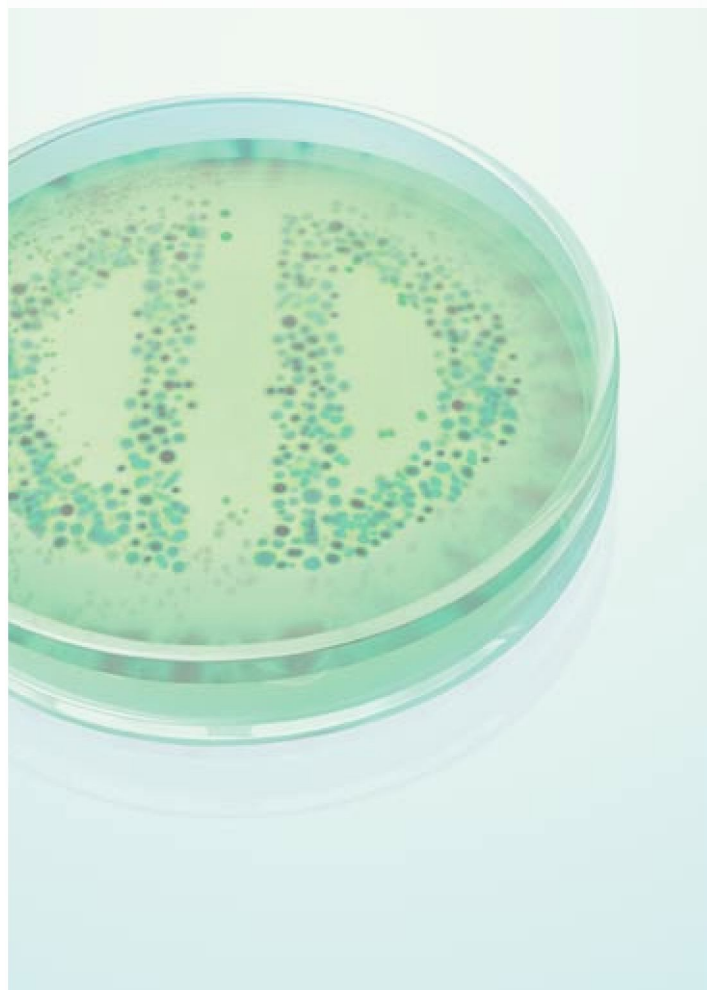
Critical and highly sensitive research material in research centres places a higher demand in the processing of these substances in terms of product and operator protection. Both of these points have been given the highest priority during the development of the “Biotech Systems” range.

Biological Class II Safety Cabinets

For sterile product preparations and biological experimentation involving agents of low and moderate risk

CO₂ Incubators

For essential thermal control of preparations in research centres, clinical biochemistry, microbiology and industry

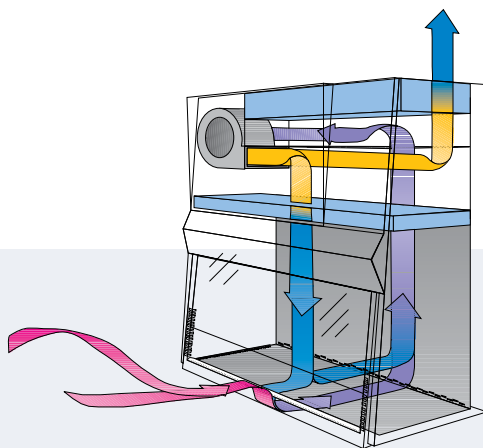


Unique airflow management for personal, product and environmental protection

With its Biological Safety Cabinets, Dometic offers a unique airflow management system and proven containment technology combined with user-friendly ergonomic design.

Dometic Biological Safety Cabinets are designed for sterile product preparations and biological experimentation involving agents of low and moderate risk. When exhausted into the room, the Safety Cabinets are classified Class II, Type A2 cabinets.

Properly vented to the outdoors through a facility exhaust system, the Safety Cabinets exceed minimum standards for Class II, Type A2 cabinets (formerly B3).



- Room Air
- Contaminated Air negative pressure
- Contaminated Air positive pressure
- ULPA-Filtered Air

BSC-SG403EN



BSC-SG403EN	
Exterior dimensions (H x W x D mm), with telescopic legs	2030 x 1362 x 776
Interior dimensions of usable workspace (H x W x D mm)	699 x 1168 x 511
Noise level (dB(A))	55
Down flow velocity (m/s)	0.25
	ULPA filter

BSC-SG603EN



BSC-SG603EN	
Exterior dimensions (H x W x D mm), with telescopic legs	2030 x 1972 x 776
Interior dimensions of usable workspace (H x W x D mm)	699 x 1778 x 511
Noise level (dB(A))	60
Down flow velocity (m/s)	0.25
	ULPA filter

CO₂ Incubators for precise temperature control

Research centres, clinical biochemistry, microbiology and the industry represent the areas where thermal control is essential. The new generation of Dometic Incubators have been designed especially for these needs. Our incubator range is defined by two volumes: 80 and 165 litres

Important features:

- Forced air convection
- Delivered with perforated non tipping over shelves
- Turbine ventilation to ensure a better uniformity when fully loaded
- Dry heat sterilization cycle (140°C, 2h)
- High temperature visual and acoustic alarm
- Overtemperature protection



BTI-80 DRS



BTI-80 DRS	
External dimensions (mm)	760 x 533 x 506
Capacity (l)	80
Sterilization cycle temperature	60°C – 140°C (1°C step)
CO ₂ range	0% - 20.00%
CO ₂ sensor	IR sensor
Relative humidity	95%

BTI-165 DRS



BTI-165 DRS	
External dimensions (mm)	915 x 625 x 635
Capacity (l)	163
Sterilization cycle temperature	60°C – 140°C (1°C step)
CO ₂ range	0% - 20.00%
CO ₂ sensor	IR sensor
Relative humidity	95%



Dometic GROUP is a customer-driven, world-leading provider of leisure products for the RV, automotive, truck and marine markets. We supply the industry and aftermarket with a complete range of air conditioners, refrigerators, awnings, cookers, sanitation systems, lighting, mobile power equipment, comfort and safety solutions, windows, doors and other equipment that make life more comfortable away from home.

Dometic GROUP supplies a wide range of workshop equipment for service and maintenance of built-in air conditioners.

Dometic GROUP also provides specially designed refrigerators for hotel rooms, offices, wine storage and transport and storage of medical products.

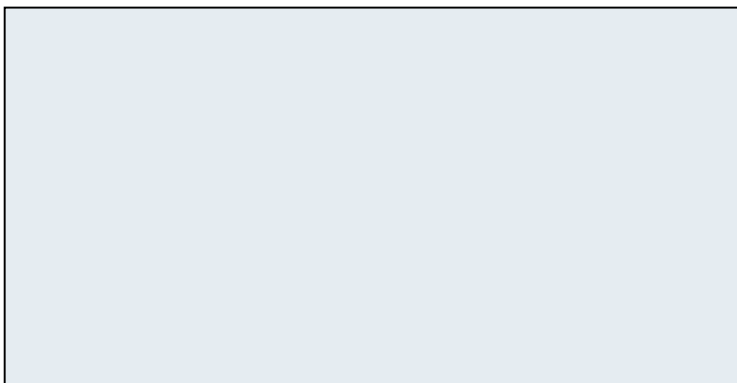
Our products are sold in almost 100 countries and are produced mainly in wholly-owned production facilities around the world.



Discover the world of Dometic Medical Systems

Subject to change without prior notice. Some of the accessories shown in the pictures are optional.

<small>DIN EN ISO 9001:2000 Zertifikat Nr 09 100 2228</small>	<small>TUV Rheinland güte für Sicherheit</small>		<small>Depending on the product</small>	<small>Internal</small>
	<small>ADR RD (2008/88/EC)</small>	<small>MDG (2002/84/EC)</small>	<small>IGAC-TI / IATA-DGR</small>	<small>ONORM K 2030</small>
	<small>DIN 58545</small>	<small>DIN 58371</small>	<small>DIN 58375</small>	<small>EN 12469</small>
				<small>II 3 G EEx nA II T8</small>



For more information:

Dometic S.à.r.l
 Division Medical Systems
 17, Op der Hei
 L-9809 Hosingen, Luxembourg
 Tel.: + 352 92 07 31-1
 Fax: + 352 92 07 31-300
 medical.systems@dometic.lu
 www.dometic.lu

02/2012

292.9707.28