



# BIO GUARD 458

## -80°C Freezer



### Efficient cooling circuit

With a unique design including an auto-cascade cooling circuit and a mix of refrigerant gas, our equipment delivers an amazing cooling efficiency.



### Excellent Performance

Our freezers are optimized for daily use, with excellent temperature homogeneity, quick pulldown time, and fast recovery after each door opening.



### Double door design

Our four independent inner door design reduces heat loss and improves insulation.

**Engineered for maximum performance, the refrigeration system design ensures reliable and consistent results.**

Leveraging advanced auto-cascade refrigeration technology, our solution delivers superior cooling power—guaranteeing safe and secure storage at -80°C, even in the most demanding operating environments.

Our new Bio Guard 458 freezer offers one of the best value-for-performance ratios on the market. An economical solution designed for efficient -80°C sample storage, combining optimized internal capacity with a compact footprint.

#### MODEL AVAILABLE

BMBG45880G	458 L
------------	-------

#### WARRANTY

Parts	2 years
-------	---------

Fan, compressors and condenser	5 years
--------------------------------	---------

VIP insulation	10 years
----------------	----------

# Technical Specifications

ULT FREEZER BIO GUARD 458 L, -80°C	
<b>MODEL</b>	<b>BMBG45880G</b>
<b>GENERAL SPECIFICATIONS</b>	
Storage Capacity	458 liters, 32,000 2 ml cryo-tubes
Compartments	4
Ext Dimension (W x D x H)	885 x 855 x 1980 mm
Int Dimension (W x D x H)	595 x 580 x 1310 mm
Ext Construction	Electro-galvanized steel epoxy paint
Int Construction	Electro-galvanized steel epoxy paint
Net Weight	237 kg
Standard Construction	4 swivel casters • 2 levelling feet • Lockable door • 2 Cable ports, 25 mm diameter for external monitoring probes • 1 power cord, 1.7 m long
No. of Internal Shelves	3 shelves, Max capacity per shelf: 49kg
Ambient temperature	From +10°C to +32°C
Insulation	6 faces, new generation of Vacuum Insulation Panel (VIP) and polyurethane foam < 0.005 W/m/K
Noise level	46 dB
Environment	Non-corrosive, non-flammable, non-explosive
Warranty	2 years. 5 years: fan, compressors, condenser. 10 years: VIP insulation
<b>CONTROL</b>	
Display	LED Screen
Software	Allow management of set temperature • High & low temperature alarm • Room temperature alarm (if out of range) • Door Alarm • Embedded keyboard • Settings of date, hour, day, month and year • Pass code • Data recording on USB stick
Settings	Temperature • Alarms • Date/Hour
Communication	USB port, alarm contact
<b>COOLING CIRCUIT</b>	
Cooling Engine	Self-cascade
Expansion Device	Capillary tube
Defrosting Method	Manual defrosting
Heat rejection	3521 BTU/h
Natural Gas Refrigerant Load	Mix of refrigerant gas: R601a/R290/R1150
<b>ELECTRIC AND ELECTRONIC DATA</b>	
Controller type	Microprocessor
Control sensor	Pt100 sensor
List of alarms	see above
Type of alarm	Visual and acoustic
Energy consumption	9.5 kWh/ day*
Remote alarm contact	Included. Can output one NC or NO signal
Power	765 W
Types of power supply	220-240V, 60 Hz, Current: 5.9A - 220-240V, 50 Hz, Current: 5.9A
Battery back-up	10 hr display and alarm back-up   Rechargeable 12V
<b>PERFORMANCES (AMBIENT TEMPERATURE +22 °C)</b>	
Temperature range	From -40°C to -86°C, 1/10th degree display
Pull down ambient to -80°C (+/-5°C)	4.4 hours
Homogeneity at -80°C	+/-5°C
<b>OPTIONS &amp; CONFORMITIES</b>	
Options / accessories	Backup system with CO2 / LN2 (with valve compatible with 150 bar max.) 5x4 stainless steel 304 racks Dimensions (mm) : 140x549x293 Pack of 16 racks (total storage of 320 Boxes, 32,000 2ml cryo tubes) 9-point COFRAC temperature mapping with IQ/QO documentation User manual available online Detachable washable filter Scraper
Conformities	<b>EN61326-1</b> (2013) Safety requirements for electrical equipment for measurement – Part 1: General requirements 2014/35/UE – Low voltage directive – <b>EN IEC 61326-1</b> (2021) EMC directive
Shipping weight	292 kg

\*Set temperature -81°C, Ambient temperature 25°C (+/-0.5°C), door closed.