## DATA SHEET TRUST | 690 L | -45°C | NATURAL GAS



Reference	
BMTRU69045G	

	General specifications
Raw volume	690 liters / 24.3 cu.ft 4 compartments
Storage capacity	48 000 cryotubes 2mL
Dimensions : externals (H x W x D) internals (H x W x D)	1990 x 875 x 970 mm / 78.4 x 38.2 x 34.5 in. 1436 x 630 x 752 mm / 56.6 x 29.6 x 24.8 in.
Construction : external internal	Electrogalvanised steel with epoxy paint Stainless steel inner tank with rounded corners
Insulation	6 faces Vacuum insulation panel (VIP) and high density polyurethane foam Thermal conductivity < 0.005 W/m/K
Net weight	330 kg / 728 lb.
Standard equipement	3 shelves (maximum weight per shelf: 75 kg / 165 lb) 4 swivel casters 2 levelling feet Key lock (2 keys supplied) 1 power cord, 3m long with IEC19 detachable connectors
Ambient operating temperature	From +18°C (65°F) to +32°C (89°F)
Indoor / outdoor use	For indoor use only
Environnement	Not designed for use in explosive atmospheres (ATEX)
Noise level	56 dB
Warranty	2 years 5 years : fan, compressor, condenser 10 years : VIP insulation

	Refrigeration system
Cooling engine	1 hermetic compressor Cold production by 5 internal walls
Expansion device	Capillary tube
Refrigerant load	R290
Defrosting method	Manual with heated door-seal and heated valve pit



	Electric and electronic data
Controller type	Fuji regulator and Schneider industrial automaton
Temperature probe	1 x Pt100 3 wires probe
List of alarms	<ul> <li>Configurable high and low temperature alarm</li> <li>Open door alarm, triggered after 2 minutes opening</li> <li>Alimentation 230 VAC, overpressure CP1, battery charge failure, engine failure, CO<sub>2</sub>/LN<sub>2</sub> injection in progress</li> </ul>
Types of alarms	Visual (OK et pictograms) and acoustic with automatic reactivation after predefined delay
Remote alarm contact	NO - NC dry contact (optionnal)
Energy consumption	< 1100 W
Types of power supply	Voltage 230V ~ +/-10%, 50 Hz, fuse protection «aM 12A» Voltage 110V ~ +/-10%, 50/60Hz, fuse protection «aM 20A» Voltage 220V ~ +/-10%, 60Hz, fuse protection «aM 12A»

	Performances (ambient temperature : 22°C / 72°F)
Temperature range	From -45°C to -25°C, 1/10th degree display
Uniformity at -40°C	+/-5°C

	Options and conformities
Options	<ul> <li>Cryo-accumulators (from 6h to 8h additional autonomy)</li> <li>CO<sub>2</sub> / LN<sub>2</sub> backup system (150 bar max electrical valve)</li> <li>Additional Pt 100 ohms 3 wires</li> <li>Thermocouple K probe</li> <li>Circular chart recorder</li> <li>4-20mA output</li> <li>COFRAC 9 points temperature mapping</li> <li>IQ / OQ documentation</li> <li>BoSS system</li> <li>NO - NC dry contact</li> <li>Padlock closure</li> </ul>
Supplied with	<ul><li>User manual</li><li>Detachable washable filter</li><li>Scraper</li></ul>
Certification / Conformities	<ul> <li>EN61010-1 – Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements</li> <li>2014/35/UE – Low voltage directive</li> <li>2014/30/UE – EMC direcive, Class A device</li> <li>97/23/CE – Under pressure devices</li> </ul>

	Shipping
Shipping dimensions (H x W x D)	2150 x 940 x 1170 mm / 84.7 x 37 x 46.1 in.
Shipping weight	350 kg / 772 lb.
Type of package	Delivered on pallet with unloading ramp

Storage elements
Full range of storage elements available





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FROILABO freezers are designed in France and made in U.E.

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