

DATA SHEET

EVOLUTION | 515 L | -86°C | NATURAL GAS



Reference

BMEV051586G

General specifications

Raw volume	515 liters / 18.1 cu.ft. - 3 compartments
Storage capacity	36 000 cryotubes 2mL
Dimensions : externals (H x W x D) internals (H x W x D)	1640 x 875 x 970 mm / 64.6 x 38.2 x 34.5 in. 1076 x 630 x 752 mm / 42.4 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	267 kg / 589 lb.
Standard equipment	2 shelves (maximum weight per shelf: 75 kg / 165 lb) 4 swivel casters 2 levelling feet Key lock (2 keys supplied) Cable port on the back of the device 1 power cord, 2m long
Working 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	<ul style="list-style-type: none"> • 2 years • 5 years : fan, compressors, condenser • 10 years : VIP insulation

Refrigeration system

Cooling engine	2 stage compressors cascade system with intermediate plate heat exchanger Cold production by 5 internal walls
Expansion device	Capillary tube
Refrigerant load	1st stage : R290 / 2nd stage : R170
Heat rejection	4777 BTU/h
Defrosting method	Manual with heated door-seal and heated valve pit

Electric and electronic data

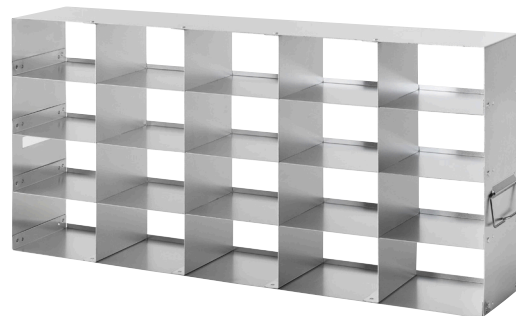
Controller type	Plug&play electronic regulator
Temperature probe	1 x Pt100 3 wires probe
List of alarms	<ul style="list-style-type: none"> • Configurable high and low temperature and open door alarm • Filter alarm, high pressure default, 24V battery back-up, BoSS system activated, CO₂ / LN₂ injection in progress
Types of alarms	Visual (12 LED and pictograms) and acoustic alarms
Remote alarm contact	NO - NC dry contact
Power	1500 W
Types of power supply	<ul style="list-style-type: none"> • 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)

Température range	From -60°C to -86°C, 1/10th degree display
Pull down from ambient to -86°C	~ 4 hours
Uniformity at -80°C	+/-5°C



Management interface	
Type of interface	Touch screen for easy navigation indicator with USB port for data collection
Type of menu	<ul style="list-style-type: none"> • «Diagnostics» for real-time informations about the freezer • «Statistics» for an overview of the figures related to the conditions of use • «Eco» to minimize the power consumption • «Infos» with serial number, gas load, BTU information
Security	<ul style="list-style-type: none"> • Settings protected by password • Key locked freezer • Delay for compressors restarting after power outage
Options and conformities	
Options	<ul style="list-style-type: none"> • Cryo-accumulators (recovery time multiplied by 2) • CO₂ / LN₂ backup system (150 bar max electrical valve) • Additional Pt100 ohms 3 wires • Thermocouple K probe • Temperature sensor delivered with its certificate of conformity • Circular chart recorder (external housing) • 4-20mA output • COFRAC 9 points temperature mapping • IQ / OQ documentation • Padlock closure
Supplied with	<ul style="list-style-type: none"> • User manual • Detachable washable filter • Ice scraper
Certification / Conformities	<ul style="list-style-type: none"> • EN61010-1 – Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements • 2014/35/UE – Low voltage directive • 2014/30/UE – EMC directive, Class A device • 97/23/CE – Under pressure devices
Shipping	
Shipping dimensions (H x W x D)	1800 x 940 x 1170 mm / 70.9 x 37 x 46.1 in.
Shipping weight	320 kg / 706 lb.
Type of package	Delivered on pallet with unloading ramp
Storage elements	
Full range of storage elements available	



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