

DATA SHEET

EVOLUTION | 690 L | -86°C



Reference

BMEVO69086

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 equipment	3 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
Environment	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

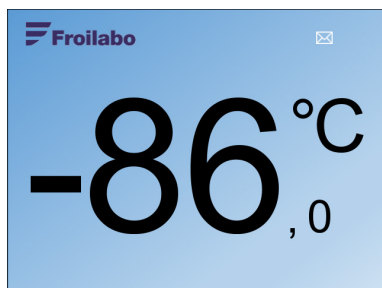
Cooling engine	2 stage compressors cascade system with intermediate plate heat exchanger Cold production by 5 internal walls
Expansion device	Capillary tube
Refrigerant load	1st stage : R417A / 2nd stage : R508B (non-flammable, without CFC and HCFC)*
Heat rejection	4777 BTU/h
Defrosting method	Manual 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»

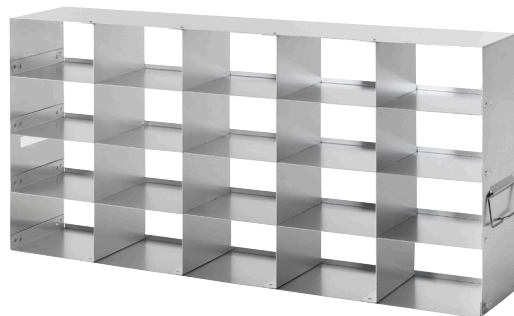
Performances (ambient temperature : 22°C / 72°F)

Temperature 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



* Fluids affected by F-Gas - natural gas replacement model already available

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 information 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)	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	



©2020 Froilabo. All rights reserved.

FROILABO freezers are designed in France and made in E.U.
The specifications and technical data presented in this datasheet are those in our possession on the date of emission. FROILABO reserves the right to make, without notice, any modifications to its products, specifications, colors, materials and technical data, or to interrupt the manufacture of the freezers.
Despite the care taken in its realization, this product sheet does not constitute a contractual document.

For more informations, go to sur www.froilabo.com.
FP_BMEV069086/EN_rev1.4 | 10/2020

Headquarter address : Froilabo, 5 avenue Lionel Terray 69330 Meyzieu, France