

DATA SHEET

EVOLUTION | 690 L | -86°C | NATURAL GAS



Reference

BMEVO69086G

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 |
| 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

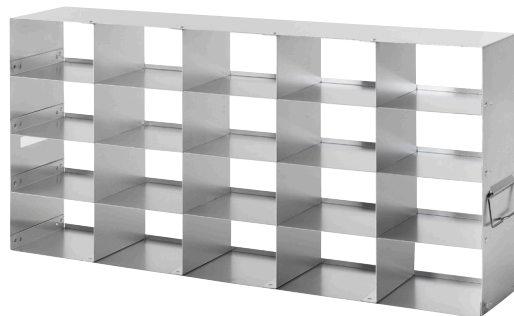
| | |
|-----------------------|---|
| Controller type | Plug & play electronic regulator |
| Temperature probe | 1 x Pt100 3 wires probe |
| List of alarms | <ul style="list-style-type: none"> • Configurable high and low temperature and open door alarm • Filter alarm, high pressure default, 24V battery 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) | 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 E.U.

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