

Technical Features

Net Storage Volume	261 lt (9,21 cu ft)
2" Cryoboxes Max Capacity	144
1,5/2ml Vials Max Capacity	14.400
Racks Max Capacity	12
Temperature Setting Range	-40°C/-90°C
Temperature Control Range	-40°C/-86°C
Factory T Set Point	-80°C
Ambient Operating Temperature	+10°C/+35°C, 50% RH (N-ST Climate Class)
Noise Level	< 52 dBA

Power Supply	230V ±10% / 50Hz
Standard Electrical Plug	Industrial plug CEE 16A, 2P+E
Max Power Absorption	1400W
Daily Energy Consumption*	10,00 kWh/24h



External Dimensions**	W 805 x D 780 x H 1870 mm W 31,69 x D 30,70 x H 73,62 inch.
Internal Dimensions	W 501 x D 470 x H 1108 mm W 19,72 x D 18,50 x H 43,62 inch.
Weight	230 kg

Packing Dimensions	Carton Box + Pallet: W 1000 x D 900 x H 2100 mm, 250 kg Wooden Crate: W 1150 x D 1150 x H 2200 mm, 340 kg
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External Surface	Anti-corrosion hot-dip galvanized steel sheet, covered with PVC film
Internal Surface	AISI 304 18/10 stainless steel
External/Internal Edges	Rounded to facilitate cleaning
Insulation Type	High-density CFC-free PUR foam
Insulation Thickness	140 mm on sides / 140 mm rear / 110 mm outer door
Door Type	Solid, with n°3 heavy-duty side hinges for the max stability
Door Sealing	Triple-layer silicone gasket, heated by the refrigerant to avoid the formation of ice
Handle	Ergonomic with integrated key-lock system (n°2 keys included)

Standard Configuration	n°3 shelves in stainless steel (AISI 304), adjustable in height (adjustment steps of 1.5 cm) with max load of 55kg each n°4 insulated inner doors (inner chamber divided into 4 compartments); inner doors can be removed for cleaning n°4 swivel castors, each one equipped with a leveling foot for a total ground stabilization Porthole (Ø 25 mm) for introducing in the chamber independent probes connected to external monitoring system/BMS External vacuum relief valve (automatic & manual pressure release); the valve can be removed for cleaning operations Back-up battery with self-charging circuit to ensure recording of T and alarm data in case of power failure (48 h autonomy) Volt-free contact for connection to an external alarm monitoring system and BMS
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Cooling System

Cooling	Static cooling, with 2-stage cascade refrigeration system; air-cooled condenser with filterless design
Compressor	n°2 hermetic compressors (with thermal protector)
HC Refrigerant (CFC/HCFC free)	1st stage: R290 2nd stage: R170
Defrost System	Manual

HPL Control System

Controller	Microprocessor Controller
Display	7" LED touch screen display (with ± 0.1°C adjustment steps)
Temperature Probes	n°2 Pt100 Class A
Access Control	3-levels password security system (User/Service/Admin)
Data Export	USB port / SIM card slot / SD card slot / RJ45 port for LAN connection (TCP/IP Modbus) to BMS/SCADA The main screen displays the T set point, high/low T limits, battery level, date/time, current voltage and real-time T graph Data logger function with automatic recording of temperature data (at 30-seconds intervals) and events
Features	Internal memory (built-in 4GB SD card) capable of recording data for a minimum period of 10 years Data history menu for consultation and selection of temperature data records, events and alarms of the device ECO mode (user can set an automatic increase of the T set point in a defined time interval, to reduce energy consumption) - Power failure - Door open (the alarm interval can be freely set by the user) - High/Low temperature (alarm limits can be set freely by the user) - Temperature probes failure - Back-up battery failure / low charge - Dirty condenser / High ambient temperature
Main Alarms List	
(Audio/visual notification)	



Accessories Available On Request

Frontal/Lateral extraction racks made in AISI 304 stainless steel for cryoboxes storage

Additional stainless steel (AISI 304) shelf

Additional internal/external porthole (Ø 25 mm)

Voltage stabilizer

Weekly cycle chart disk recorder (including n°52 spare paper disks + n°1 pen)

CO2 backup system with 12VDC (complete with independent thermal sensor/T controller, 24Ah battery) for activation in case of mechanical/power failure

LN2 backup system with 12VDC (complete with independent thermal sensor/T controller, 24Ah battery) for activation in case of mechanical/power failure

GSM Module with SIM card bridge

Wi-Fi kit (TCP/IP Modbus) for connection to BMS/SCADA and remote monitoring

Electric lock for door opening with PASSWORD

Electric lock for door opening with BADGE/RFID

Electrical plug different from standard

Packing in wooden crate



Ergonomic handle with key-lock system



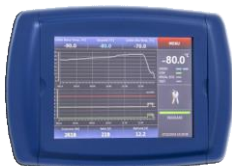
Shelves adjustment system



Insulated inner door



Heated triple-layer silicone gasket



HPL controller



Remote alarm contacts



Vacuum relief valve



CO2/LN2 back-up systems



Frontal extraction racks



Lateral extraction racks

* with +20°C ambient temperature

** Exterior dimensions of main cabinet only, excluding handle and other external projections (+ 8,5 cm in W / + 7,5 cm in D)