

Ultra low temperature freezers -40°C and -86°C
NEXUS EVO MD Series



Our experience

in the world of blood and blood derivatives storage



➤ For over 85 years Angelantoni has been producing a full range of freezers for the long-term preservation of biological samples used in scientific laboratories, in pharmaceutical research, in hospitals and in any other application where it is necessary to preserve material of human, animal, plant origin or microorganisms at low / ultra-low temperatures.

Angelantoni's experience in the refrigeration market, combined with the continuous search for solutions which can provide its customers quality products, has led to the development of **NEXUS EVO MD**, a new state of the art line of ultra-freezers with functions developed and tested by biomedical professionals.

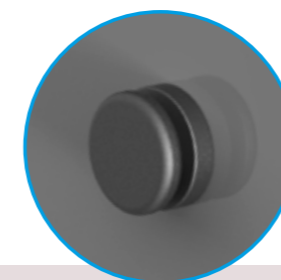
The innovative handle and the new generation controller contribute to the **NEXUS EVO MD** line's top level performance.

ANGELANTONI LIFE SCIENCE has a wide range of smart blood bank refrigerators (Hemosafe 2.0), blast freezers for plasma (Plasmafrost ITEM 3, 4) and freezers designed to meet the needs of small, medium and large transfusion centers, hospitals, nursing homes and analysis laboratories.

In this catalog we present the complete line of freezers at -40° C and -85° C for storing blood and its derivatives. All the equipment are certificated according to the Medical Devices Directive 93/42/EEC, as a demonstration of the company's great commitment to the manufacture of high quality and high reliability products that can guarantee maximum safety in the storage of biological liquids.



Notified body No.:
2460



Connection through an **ACCESS PORT**



Internal chamber in **AISI 304 STAINLESS STEEL**



Safety and traceability access with the **BIOGUARD®** system



Pressure equalization valve that allows **REDUCED ICE FORMATION** and **ENERGY SAVING**



MAXIMUM CONNECTIVITY using **Ethernet** communication modules



Latest generation **CONTROLLER** with **CAN-BUS** internal protocol



Real-time data download via integrated **USB** port and basic software included



Easy, user friendly with a new **ERGONOMIC HANDLE** for user comfort



Easy moving with **PIVOTING CASTORS**



NEXUS EVO MD: Product features



Maximum protection

The AISI 304 Stainless steel internal chamber, together with the sophisticated external powder coated epoxy paint process, ensures maximum corrosion protection and long life.



Reduced ice formation

Inner doors with a variable configuration (from 3 to 5) and new concepts of pressure equalization valve reduce ice formation. The door's insulation efficiency is also guaranteed by a system of flat hinges which improve the seal of the gaskets.



Outside communication

Standard 23mm access port for the insertion of additional probes.



Interior space optimization

All ULT freezers are equipped with a system of height-adjustable shelves (drawers optional) allowing for the maximum utilization of the interior space, as well as the appropriate placement of the storage racks and cryogenic boxes.



Easy opening system

The main door opening and closing is characterized by a new, effective, ergonomic handle that allows for single handed operation. Standard key lock or optional BIOGUARD® lock system.



Environmentally friendly

At ANGELANTONI we consider ourselves to be "eco-friendly", so we use HCFC-free gas in all our products.



Easy cleaning

The washable and reusable air filter is located in the lower front face of the ULT freezer, allowing easy access. Rounded corners of the internal chamber simplify cleaning.



Low noise levels

The cabinet and cooling system are designed to minimize noise, so the ULT freezers can be placed in laboratories or hospitals without disturbing operators.



More safety in the accesses

The security of samples can be increased with the optional BIOGUARD® system, which provides complete access control. With this option, the door is equipped with an electric lock that can only be opened using authorized cards. This ensures total traceability of accesses.



Easy handling

All vertical and horizontal ULT freezers are equipped with pivoting castors, making it easy to move them when necessary. Adjustable feet are provided for easy levelling.



Freezing uniformity

The serpentine cooling system ensures and constant cooling, guaranteeing the internal temperature stability and uniformity.



Maximum connectivity

The electronic management of all ULT freezers is provided by the latest generation controller that optimizes performance and functionality and allows for simple remote adjustment and monitoring of the freezer.



Vertical model



Version with drawers



Version with shelves (optional)



Horizontal model

New ergonomic handle

EASY ACCESS TO YOUR SAMPLES

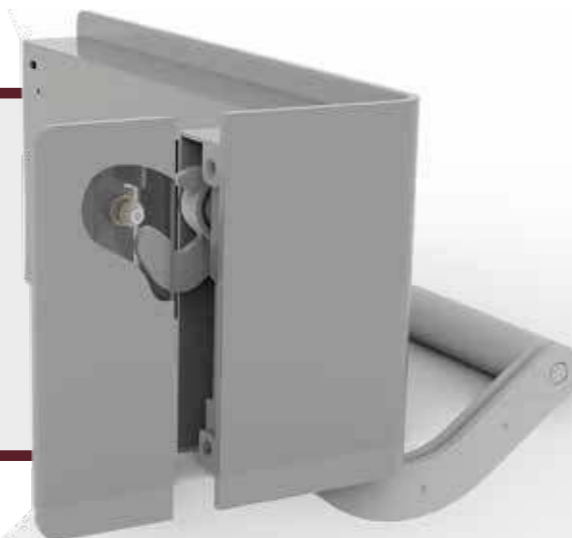


Following an extensive study and design process, **NEXUS EVO MD** ULT freezers have been equipped with a **new door handle** incorporating modern design and ergonomics. The **lever-operated** opening and closing mechanism, reduces the effort during opening and generates maximum pressure with minimum effort when closing. This makes it possible to increase the effectiveness of the insulation from the outside, reducing ice formation. The front position of the handle allows the ULT freezer to be positioned alongside other equipment, maximizing space usage.

In order to improve the mechanical performance, the handle also has a servo assisted system that totally eliminates friction, allowing the opening and closing to be done **with just one hand**.

More practical, improved performance.

In the **NEXUS EVO MD** ULT freezers the handle is easily gripped and functional, providing the perfect balance between the Made in Italy design and ergonomics.



Latest generation controller

A LEADING COMPONENT FOR ITS RELIABILITY, PERFORMANCE AND EASY USE



NEXUS EVO MD ULT freezers are fitted with the latest generation **ACP7** controller, developed after years of experience and utilizing the latest technologies. It is capable of guaranteeing high performance, maximum safety and ease of use.

The **controller** has a **user friendly** interface which allows the monitoring of functions and change of settings.

Access to parameters is password protected with **3 access levels**: user, service and administrator.



The sophisticated **display uses advanced technology** and is easy to use, thanks to **intuitive icon surfing**, the **touch screen** and the **multilingual instructions**. Its large 7" size allows easy and immediate display of the menu steps and an intuitive color identification of the alarms.

The controller is equipped with a system of **3 independent microprocessors** that communicate with each other using **CAN-BUS** connection system, which is well known for its high reliability and immunity to electrical interference.



Latest generation controller

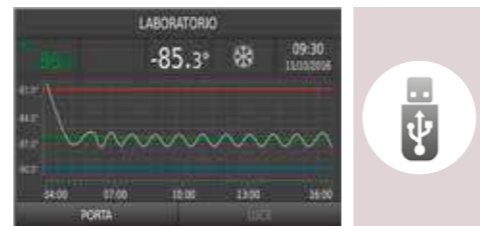
COLD CONNECTIVITY AND INTELLIGENT CONTROL

The ACP7 controller has innovative features that reduce consumption and thanks to 3 separate microprocessors for: REGULATION, ALARM and DISPLAY allows continuous monitoring of parameters.

The **REAL-TIME** function allows daily display of temperatures. The functionality is completed by the events lists. Temperature recording and operating variables sampled every 30 sec. for up to **10 years**. All data is stored and the event log files can be downloaded to a PC via the built in **USB port**.

The **ECOMODE** function enables the ULT freezer to operate in energy saving mode.

It is possible to regulate access to the controller and enable the modification of the user parameters through the use of **PERSONAL PASSWORDS**.



MORE SAFETY FOR YOUR SAMPLES

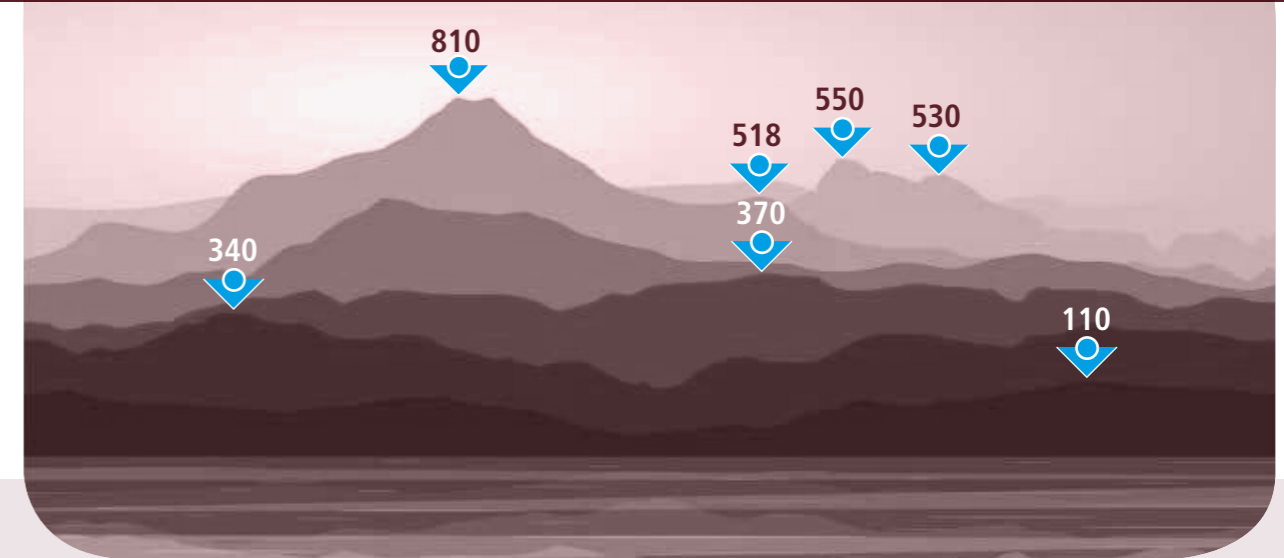
The **SMART DIAGNOSTIC** function ensures constant monitoring of the wear of the main components. When the preset maximum wear threshold has been reached, an alarm will prompt the replacement of the component, reducing the risk of machine downtime.

The internal temperature is constantly monitored with an alert when it reaches the safety threshold.

The **BACK-UP BATTERY** provides periodic tests, state of charge and replacement warning. In case of a power failure, the battery has a 30 hours operating time.

In case of power or mechanical failure, the **BACK-UP CO2** or **LN2** system (optional) guarantees the safety of the samples for approximately 24 hours. In case of prolonged door opening, the CO2 or LN2 back up system starts working to support the immediate recovery of the temperature, thanks to the intelligent reading of the electronic system.

A complete range from 110 to 810 litres



The **NEXUS EVO MD** series is a very comprehensive range of freezers and ULT freezers meeting all requirements in terms of volumes and control electronics.

The series includes volumes from 110 liters up to 810 liters:

- Horizontal versions 110 liters, 370 liters, and 550 liters
- Vertical versions 340 liters, 530 liters, and 810 liters

The range is completed by the vertical version of the NEXUS 518 EVO MD freezer in the -40° C configuration only. This model differs from the others for the structure of the internal tank in anti-abrasive white ABS. It holds 14 drawers for the storage of 28 bags of 1 liter or 84 bags of 450 ml of plasma. The internal compartment consists of 7 refrigerated shelves, whose positions are fixed.



Nexus 518 EVO MD

Optionals / Accessories

	NEXUS EVO MD -80°C								
	HORIZONTAL			VERTICAL					
	110	370	550	340 V-3	340 V-4	530 V-3	530 V-4	810 V-4	810 V-5
Chart recorder	11352								
BIOGUARD opening door with card	N.D.	14161							
Additional BIOGUARD badge	11976								
Through hole diam.23 mm. with rubber cap	11234								
Rack for plasma bags	1440			N.D.					
Stainless Steel Internal shelf	N.D.			11204				18006	
Stainless Steel Sliding telescopic drawer	N.D.			11202	11203		18004		
Co2 back-up system	14163								
LN2 back-up system	14164								
LN2 back-up system with hose	14165								
GSM telephone dialer module	13884								
Additional probe pt 100 in class A (three-wire)	13233								
PT100 probe certified on 3 points (-60°C/-70°C/-80°C)	14174								
PT 100 probe in class a with 4-20 ampere signal transmitter	11870								
Ethernet communication module	13921								
WI-FI module	13922								
3G-GSM module for alarm signaling	14096								
CRYOLOG licence	13925								
ALS IQ and OQ Protocols	IQ_OQ_ALS								

	NEXUS EVO MD -40°C									
	HORIZONTAL			VERTICAL						
	110	370	550	340 V-3	340 V-4	518	530 V-3	530 V-4	810 V-4	810 V-5
Chart recorder	11351									
BIOGUARD opening door with card	N.D.	14161								
Additional BIOGUARD badge	11976									
Through hole diam.23 mm. with rubber cap	11234			12298		11234				
Rack for plasma bags	14440			N.D.						
Stainless Steel Internal shelf	N.D.			11204	N.D.		11204	13006		
Stainless Steel Sliding telescopic drawer	N.D.			11202	N.D.		11203	13004		
LN2 back-up system with hose	14165									
GSM telephone dialer module	13884									
Additional probe pt 100 in class A (three-wire)	13233									
PT100 probe certified on 3 points (-60°C/-70°C/-80°C)	13665									
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CRYOLOG licence	13925									
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Models

HORIZONTAL			
-86°C		-40°C	
Model	Code	Model	Code
Nexus 110 H EVO MD	14430	Nexus 110 SH EVO MD	14421
Nexus 370 H EVO MD	14431	Nexus 370 SH EVO MD	14422
Nexus 550 H EVO MD	14432	Nexus 550 SH EVO MD	14423
VERTICAL			
-86°C		-40°C	
Model	Code	Model	Code
NEXUS 340 V-3* EVO MD	14434	NEXUS 518 SV* EVO MD	14417
NEXUS 340 V-4* EVO MD	14435	NEXUS 340 SV-3* EVO MD	14424
NEXUS 530 V-3* EVO MD	14436	NEXUS 340 SV-4* EVO MD	14425
NEXUS 530 V-4* EVO MD	14437	NEXUS 530 SV-3* EVO MD	14426
NEXUSSlim 810 V-4* EVO MD	14438	NEXUS 530 SV-4* EVO MD	14427
NEXUSSlim 810 V-5* EVO MD	14439	NEXUSSlim 810 SV-4* EVO MD	14428
		NEXUSSlim 810 SV-5* EVO MD	14429

*Inner doors quantity

Specifications

MODELLI	HORIZONTAL			VERTICAL			
	NEXUS EVO MD			NEXUS EVO MD			NEXUSSLIM EVO MD
	110	370	550	340	518	530	810
DIMENSIONS							
Ext. Dim. (mm) (WxDxH)	730 x 990 x 1100	1780 x 910 x 1140	2320 x 910 x 1140	790 x 794 x 1978	745 x 820 x 1965	1040 x 974 x 1978	1112 x 960 x 1978
Int. Dim (mm) (WxDxH)	450 x 560 x 450	1050 x 520 x 670	1590 x 520 x 670	450 x 530 x 1350	605 x 550 x 1550	700 x 530 x 1350	906 x 609 x 1472
Liters (lt)	113	370	550	322	500	530	813
Weight (kg)	150	234	275	234	143	262	362
TECHNICAL PERFORMANCES							
Range of temperature (°C)	H	V	(- 40 ~ - 86)				
	SH	SV	(- 20 ~ - 43)				
Working temperature (°C)	H	V	- 80				
	SH	SV	- 40				
Noise level (db (A))	< 55						
Maximum absorbed current (A)	H	V	7		/		9
	SH	SV	3,5		2		3,5 4
Power supply	220 V – 115 V (50 Hz o 60 Hz)						
Refrigerant Gas	H	V	MIX (R23+R290+R170) (for -86°C)				
	SH	SV	R452a (for -40°C)				
STRUCTURE							
Exterior finish	Powder coated epoxy paint						
Internal material	Stainless Steel AISI 304						
Insulation (mm)	140 PU			70	140 (PU)	70 (VIP)	
Inner doors (Nr)	1	4	4	3 o 4	/	3 o 4	4 o 5
Shelves (Nr)	/	/	/	2 o 3	7	3 o 4	4 o 5
Drawers (Nr)	/	/	/	max 9 (optional)	14	max 8 (optional)	max 12 (optional)
Shelf load capacity (Kg)	/	/	/	40	20	40	
Drawer load capacity (Kg)	/	/	/	40	20	40	
Q.ty of plasma bags 1000 ml (dimensions 300x130) for shelf	/	/	/	4	2	8	12
Q.ty of plasma bags 450 ml (dimensions 180x130) for shelf	/	/	/	8	6	14	20
Q.ty of plasma bags 1000 ml (dimensions 300x130) tot	50	130	200	/	28	/	/
Q.ty of plasma bags 450 ml (dimensions 180x130) tot	100	260	400	/	84	/	/

Angelantoni Life Science (ALS), a sub-holding fully owned by Angelantoni Industrie, is one of the leading international companies in the supply of refrigerating equipment and the design of technological solutions in the biomedical industry, with a constant commitment to biological and environmental innovation and safety.

Research centers, hospitals, laboratories, universities and industrial companies in the pharmaceutical and chemical industry are the recipients of ALS production, which covers all the needs for refrigeration, infection control and microbiological safety with a wide range of standard and special products. With its agents and distributors in over 40 countries, Angelantoni Life Science is the ideal partner in the healthcare sector and scientific research.

Our strength comes from the skills of our engineers and the experience they have gained in design, from the professionalism of our technicians in production and service and the coordination of experienced managers supporting our staff.

Each team member contributes their enthusiasm and scientific and industrial knowledge to a work environment that stimulates innovation and development. Angelantoni Life Science invests more than 10% of its turnover in Research and Development, involving a multidisciplinary team of technicians and researchers.

Founded in 1932, Angelantoni Industrie is an industrial group with 4 plants and over 500 employees. It is one of the world's leading companies in the production of environmental and space simulation chambers (ATT Angelantoni Test Technologies), cold technology applications in pharmaceutical and hospital research (ALS Angelantoni Life Science), Energy Efficiency (Turboalgor) and Solar Thermodynamic Energy (Archimede Solar Energy receiver tubes).



Stabilimenti Angelantoni



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