

EVOLUTION

Elevate your biorepository operation to a new level of secure
inventory management and regulatory compliance



EVOLUTION

THE NEXT GENERATION OF HIGH-CAPACITY FREEZERS

Since its introduction in 2004, the Laboratory Archival Biological Storage (LABS) Series has been the benchmark cryogenic freezer system in biobanking. Now, keeping pace with the latest in technological advances, IC Biomedical introduces an new evolutionary, feature-rich biorepository freezer that's configured for safe, reliable storage with a control platform compatible with digitally connected laboratory data management environments and regulatory requirements.

Evolution's fully redundant level management, combined with new leak-free plumbing for nitrogen supply and level measurement, creates a uniquely robust operational platform at the lowest storage temperature in the industry.

Freezer Features

- Space-efficient with enhanced user ergonomics, racks are easier to place, find and remove
- Improved level and temperature management with completely redesigned liquid delivery
- Fail-safe level measurement with dual, fully redundant, control channels
- Interior LED lighting and automatic defogging fan maximize sample visibility when working with the freezer
- Fully certified and compliant to MDR (EU 2017/745)



Automatic defogging fan and interior LED light maximize sample visibility



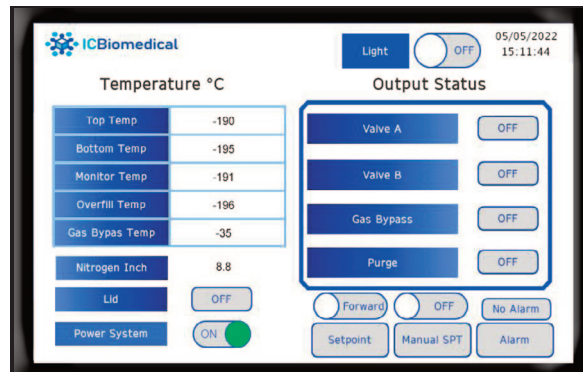
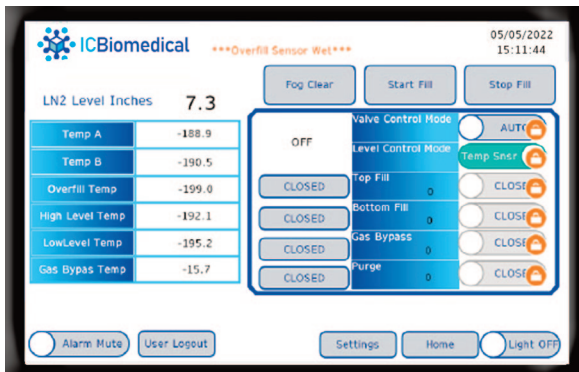
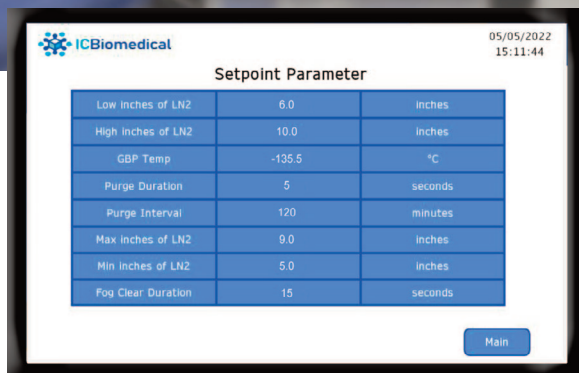
New leak-free plumbing manifold design



Control Features

Control systems are a fundamental building block of freezer functionality and the facilitation of compliance. The control unit has been designed to provide a simple, intuitive interface with an extremely robust, redundant control platform featuring state-of-the-art connectivity and simple user interaction.

- Dual, redundant level sensing guards against level control issues
- Large, touchscreen user panel
- Industry-proven PLC controller providing robust control platform
- Web server and API supports BMS and Network connection
- User management and audit-trail functions



External Data Management

- Each control unit can operate as a web server allowing for external access to all operational functions remotely, as required by the administrator
- Onboard IoT functionality connects to available cloud or intranet server for full data collection and storage with external access and monitoring
- External messaging via SMS, text or email is available
- API allows for integration with external proprietary BMS systems without hardwire requirement
- Wired Modbus interface is available



EVOLUTION

Temperature & Level Control Capabilities

FEATURE	STATUS
Discrete RTD Level Control	Standard
Differential Pressure Level Control	Standard
Temperature Measurement - RTD	Standard
Cloud or Network Data Platform	Field Update
Audit Trail / User Activity	Optional



Industry-leading temperature management, interior lighting and automatic fog removal facilitate precise, reliable user interaction and ultimate sample protection

Aggregated and displayed data management for freezer performance and operation

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User data and activity recording

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Composite audit trail

Integration into available or authored inventory management systems

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Logistics management, remote operation, connection to 3rd-party logistics operations

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Notification of adverse events, alarm states, etc.

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Online access to status with app-based UI

Rack Capacity by Model

	414-P	415-P	414-R	415-R	614-P	615-P	614-R	615-R
Number Std Racks (Boxes)	24 (336)	24 (360)	26 (364)	26 (390)	54 (756)	54 (810)	60 (840)	60 (900)
Number Mini Racks (Boxes)	16 (56)	16 (60)	16 (56)	16 (60)	30 (105)	30 (112.5)	12 (42)	12 (45)
Number Half (Vertical) Racks (Boxes)	72 (360)	72 (432)	72 (360)	72 (432)	156 (730)	156 (936)	156 (730)	156 (936)

Model Specifications

EVOLUTION MODEL		313-P	314-P	414-P	414-R	415-P	415-R
1.2 and 2 ml Vials		18,200	19,500	39,200	42,000	42,000	45,000
Quantity of Large Racks		12	12	24	26	24	26
Quantity of Mini Racks		4	4	16	16	16	16
Number of Shelves Per Rack		14	15	14	14	15	15
1.2 and 2 ml Vials		20,000	24,000	38,000	37,000	45,600	44,400
Quantity of Vertical Racks		40	40	74	76	76	74
Total LN2 Capacity Storage (L)		51	51	102	102	102	102
Total Inner Vessel Capacity (L)		689	806	978	978	1139	1139
Inside Diameter (in/mm)		29.9/760	29.9/760	39.8/1012	39.8/1012	39.8/1012	39.8/1012
Outside Diameter (in/mm)		32/814	32/814	42/1068	42/1068	42/1068	42/1068
Overall Height (in/mm)		56.5/1437	63/1602	55.8/1419	55.8/1419	61.9/1574	61.9/1574
Useable Height (in/mm)		30.9/785	36.8/936	31/788	31/788	37.2/947	37.2/947
Weight, Empty (lb/kg)		462/209.6	512/232.2	677/307	677/307	737/334.5	737/334.5
Weight, Full Without ICS (lb/kg)		553/250.8	603/273.3	858/389.1	858/389.1	918/416.6	918/416.6
Neck Opening (in/mm)		11.8/300	11.8/300	16.7/426	16.7/426	16.7/426	16.7/426
Blood Bag Capacities	25ml	-	1836	3320	3184	-	-
	50ml	-	1024	1736	1687	-	-
	250ml	-	520	812	768	-	-
	500ml	-	380	608	576	-	-

EVOLUTION MODEL		614-P	614-R	615-P	615-R
1.2 and 2 ml Vials		86,100	89,250	92,250	94,500
Quantity of Large Racks		54	60	54	60
Quantity of Mini Racks		30	12	30	12
Number of Shelves Per Rack		14	14	15	15
1.2 and 2 ml Vials		84,000	-	100,800	-
Quantity of Vertical Racks		168	-	168	-
Total LN2 Capacity Storage (L)		271	271	271	271
Total Inner Vessel Capacity (L)		1667	1667	1900	1900
Inside Diameter (in/mm)		57.9/1470	57.9/1470	57.9/1470	57.9/1470
Outside Diameter (in/mm)		60/1524	60/1524	60/1524	60/1524
Overall Height (in/mm)		57.8/1469	57.8/1469	63.9/1625	63.9/1625
Useable Height (in/mm)		31.5/800	31.5/800	37.7/958	37.7/958
Weight, Empty (lb/kg)		1271/576.6	1271/576.6	1358/615.9	1358/615.9
Weight, Full Without ICS (lb/kg)		1754/795.6	1754/795.6	1841/834.9	1841/834.9
Neck Opening (in/mm)		24.5/622	24.5/622	24.5/622	24.5/622
Blood Bag Capacities	25ml	-	-	6704	6432
	50ml	-	-	3936	3920
	250ml	-	-	1980	2010
	500ml	-	-	1380	1550

Evolution's fully redundant level management, combined with new leak-free plumbing for nitrogen supply and level measurement, creates a uniquely robust operational platform at the lowest storage temperature in the industry.



All products are produced
in our medical-grade,
ISO 13485-certified
manufacturing facility in
Cartersville, Georgia USA.

A 65-year legacy of cold chain storage and transport technology

Capitalizing on a 65-year legacy of cold chain storage and transport technology, IC Biomedical is bringing new life to the cryogenic equipment world. IC Biomedical builds the highest-quality cryogenic storage and transport systems for the global biomedical research and development, healthcare, biorepository, pharmaceutical, biotechnology, IVF and animal husbandry markets.