

GENAXY[®]

Customer Satisfaction Through Business Ethics



GENAXY IceBerg series
Ultra-low Temperature Freezer Upright

GENAXY IceBerg series

Ultra-low Temperature Laboratory Deep Freezer

KEEP IT CHILL, ORGANIZED & SAFE WITH IceBerg.

The importance of ultra-low temperature freezers in scientific research cannot be overstated. These specialized freezing units, capable of reaching temperatures as low as -86°C (-123°F), play a critical role in preserving a wide range of biological and medical samples. They are a critical choice when it comes to preservation of biological samples, vaccine storage, bio-banking and biomedical studies, drug discovery, cryopreservation of stem cells, genomic research and sequencing, clinical research, protection against sample contamination & long-term data reproducibility.

Maintaining a consistent temperature of -86 degrees Celsius (-123 degrees Fahrenheit) in ultra-low temperature freezers is crucial for preserving the integrity of stored samples. Several factors contribute to the successful maintenance of this temperature:

"It is essential to access freezer samples swiftly to minimize temperature fluctuations. However, finding the right sample often takes time, allowing warm air to affect frozen samples. The IceBerg series ULT freezers are equipped with efficient dual compressors, ensuring rapid recovery and returning temperatures to -86°C promptly. This feature safeguards samples effectively during access, providing reliable protection.

Accommodation capacity for up to 50,000 tubes of (1.5 mL) for your daily sample storage, combined with excellent pull-down and recovery times

CFC-Free complete polyurethane foaming insulation, hydrocarbon refrigerant.

Heated door frame to avoid condensation on the doors

Different racks are available for organized freezers.



Application:

-86°C ULT Freezer is specially designed for long term storage of various biological products, such as germs, virus, erythrocytes, leukocytes, cutis. It can be installed in institutions including blood banks, hospitals, epidemic prevention services, research institutes and laboratories for electronic and chemical plants, biological engineering institutes and marine fishery companies.

Smart Frequency Conversion (Inverted Compressor) assuring user -70°C in case of one compressor fails

Temperature Control

- Microprocessor control, Large LCD touch screen display inner temperature clearly and with easy view.
- The inner temperature can be adjustable at the range of -40°C~-86°C, with an increment of 0.1°C.
- Lock and password for protection to prevent arbitrary adjustment of operating parameters.
- PID Log controller : PC Interface facility Rs 485 communication (optional) to download the data on to the software.

Safety Control

Malfunction alarms: high temperature alarm, low temperature alarm, Sensor failure, Power failure alarm, low voltage of backup battery, Over temperature alarm system, set the alarm temperature as requirements.

Three alarming methods: buzzer alarming, digital flashing alarming and Remote alarm (optional);

Protection function: power-on delay, time between stops.

Refrigeration System

Optimised dual cascade refrigeration technology having special evaporation system with CFC/ HCFC free refrigerant gas

Specially designed Heat Exchanger, high efficient heat transfer, energy conservation;

V.I.P insulation panels to ensure the insulation performance.

CFC-Free overall polyurethane foaming insulation, Inbuilt micro inverter i.e battery backup to control system up to 24 hours during power failure.

Ergonomic Design

- Safety door lock, preventing unauthorized access;
- Wide voltage design from 192V to 242V;
- Individual Foam Inner Doors for each shelf to minimize frost.
- Suitable for 2" and 3" international standard freezer boxes.
- Pressure-balanced port design, easy to open the door.
- Heavy type caster wheel and levelling feet;
- Ultra-simple condenser filters design, convenient for maintenance and washing.

Technical Specification:

Model		ULT 480L	ULT 590L	ULT 730L
Technical Data	Cabinet Type	Vertical	Vertical	Vertical
	Climate Class	N	N	N
	Cooling Type	Direct cooling	Direct cooling	Direct cooling
	Defrost Mode	Manual	Manual	Manual
	Refrigerant	Hydrocarbon, Mixing	Hydrocarbon, Mixing	Hydrocarbon, Mixing
Performance	Cooling performance()	-80	-80	-80
	Temperature Range()	-40~-86	-40~-86	-40~-86
	Compressor	2		
	Control Accuracy	±0.2°C		
	Set Point Security	Yes		
	Temperature Uniformity	±4°C for Normal Compressor ±2°C for VFD Compressor		
Material	Exterior Material	CRCA powder coated		
	Interior Material	Stainless Steel 304		
	Insulation Material	PUF Insulation with Vacuum Insulated Panel		
Dimensions	Capacity(L)	457L	570L	710L
	Interior Dimensions(W*D*H)	460 x 720 x 1310mm	590 x 720 x 1310mm	740x 720 x 1310mm
	Exterior Dimensions(W*D*H)	790 x 1100 x 1950 mm	920 x 1100 x 1950 mm	1070 x 1070 x 1960mm
	Thickness of Cabinet Foamed Layer	70mm		
	Thickness of Door	70mm		
	Capacity:2" Cryo Racks/box	300	400	500
	Inner door	4	4	4
	Outer door	One solid insulated door with unique handle design for positive sealing.		
	Door Frame	Provided with heater to avoid condensation		
Electricals	Power Supply(V/Hz)	220V/50Hz	220V/50Hz	220V/50Hz
	Current (A)	(A)		
	Sound Level dbA	60 dBA		
	Energy Consumption /day	11 kWh/day		
	Peak Variation	Strong		
	Door Opening Recovery Time	<7 Min		
Data	Data Transfer (Inbuilt)	Inbuilt feature to connect the controller to optional GENAXY Software Version 1.3 to transfer data ONLINE for storage in the computer.		
	USB Interface (In Built)	Data recording system in USB port for downloading data to PEN DRIVE so as to transfer the same to the computer		

Protection Features	Password Protection	Control system provided with password so as to access to the authorized personnel		
	Battery Backup	Inbuilt micro inverter i.e. Battery backup for control system up to 24 hours during power failure.		
	Compressor protection	Compressor provided with time delay.		
		Compressor provided with over-pressure protection		
Remote Alarm		Output available to be connected to external alarm or hooter system.		
Controller Functions/ Safety Features	Display	7" touch screen HMI		
	High/Low Temperature	Y	Y	Y
	Condenser Choke	Y	Y	Y
	Power Failure	Y	Y	Y
	Sensor Malfunction	Y	Y	Y
	Low Battery	Y	Y	Y
	High Ambient Temp	Y	Y	Y
	Door open	Y	Y	Y
	High/Low voltage	Y	Y	Y
Accessories	Caster	Y	Y	Y
	Test Hole	Y	Y	Y
	Shelve: stainless steel hight adjustable	3	3	3
	Chart Temperature Recorder	Optional	Optional	Optional
	Door locking device	Y	Y	Y
	Handle	Y	Y	Y
	Pressure balance hole	Y	Y	Y
	Racks & Boxes	Optional	Optional	Optional

Optional Accessories:

- Remote alarm system for one chamber.
- Additional SS trays
- PID Log controller- Assembly along with PC communication software for single chamber.
- PC Interface facility RS485 communication to download the data on to the software with PID log controller to record set value, actual value, date and time.
- 21 CFR Part 11 ready communication software for data management -Desktop based
- 21 CFR Part 11 ready communication software for data management - Server based
- Cryo Racks 5×5 drawer type frozen rack 25 counterweights load bearing capacity 16720 g.



GENAXY ULT Freezer Consumables Configuration

Model	Plan	Freezer Rack Model	Plan	Freezer Rack Quantity /Unit		Cryogenic Box Quantity /Unit		Cryogenic Vial Quantity (2ml)	
				Rows	Qty.	Box Size	Qty.	Box 9x9	Box 10x10
ULT 940LV	A	-55-CQ-940	Side Type	5 x 5	28	2 inch	700	56700	70000
	B	-55-CT-940	Drawer Type	5 x 5	28		700	56700	70000
ULT 800LV	A	-54-CQ-800	Side Type	5 x 4	28	2 inch	560	45360	56000
	B	-54-CT-800	Drawer Type	5 x 4	28		560	45360	56000
ULT 730L	A	-55-CQ-710	Side Type	5 x 5	20	2 inch	500	40500	50000
	B	-55-CT-710	Drawer Type	5 x 5	20		500	40500	50000
ULT 640L	A	-54-CQ-640	Side Type	5 x 4	18	2 inch	360	29160	36000
	B	-54-CT-640	Drawer Type	5 x 4	18		360	29160	36000
ULT 590L	A	-55-CQ-570	Side Type	5 x 5	16	2 inch	400	32400	40000
	B	-55-CT-570	Drawer Type	5 x 5	16		400	32400	40000
ULT 500L	A	-54-CQ-500	Side Type	5 x 4	14	2 inch	280	23328	28800
	B	-54-CT-500	Drawer Type	5 x 4	14		280	23328	28800
ULT 480L	A	-55-CQ-440	Side Type	5 x 5	12	2 inch	300	24300	30000
	B	-55-CT-440	Drawer Type	5 x 5	12		300	24300	30000
ULT 400L	A	-43-CQ-400	Side Type	4 x 3	18	2 inch	216	17496	21600
	B	-43-CT-400	Drawer Type	4 x 3			216	17496	21600
ULT 350L	A	-43-CQ-400	Side Type	4 x 3	18	2 inch	216	17496	21600
	B	-43-CT-400	Drawer Type	4 x 3			216	17496	21600
ULT 300L	A	-43-CQ-300	Side Type	4 x 3	12	2 inch	144	11664	14400
	B	-43-CT-300	Drawer Type	4 x 3	12		144	11664	14400
ULT 250 L	A	-10-ST-305	Portable	10 layer	20	2 inch	200	16200	20000
	A	-9-ST-155	Portable	9 layer	9	2 inch	81	6561	8100

Corporate Office

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