ULTRA BIOFREEZE

The inception of the "refrigeration" concept dates back to the 11th century, when a Persian scientist, Ibn Sina used refrigerated tubing to distil the essential oils. Over the centuries, refrigerators have evolved and have become an integral part of the general laboratory and healthcare diagnostics industry. Ultra Biofreeze today, are one of the most important equipment for almost all kinds of biological laboratories, generally used for the purpose of safekeeping and storing the specimens for a long period of time.

Avante Ultra Biofreeze can provide an ideal and suitable freezing environment for industrial and medical applications. At -80.0 °C, the Ultra Biofreeze can be used to preserve vaccines, micro-organisms, Plasma, related blood components, and other testing materials and electronic components.

CABINET CONSTRUCTION

The cabinet of the Ultra Biofreeze is insulated with high-density CFC free Polyurethane Foam.
The interiors of the chambers have a mirror finish
stainless-steel (304 SS, 1.0 mm thick). The door on the device is equipped with a magnetic gasket and a keyed door lock. The Ultra Biofreeze is designed with a solid stainless steel wire mesh tray to ensure an even storage and temperature distribution inside.

REFRIGERATION SYSTEM

The cooling is effected by CFC free refrigeration system with a condensing unit located inside the chamber. Aante condensing units are characterised by high-efficiency heat transfer and low power consumption.

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- CFC free eco friendly cascade refrigeration system
- Inner grooved copper tubes and slit aluminum fins for superior heat transfer
- Filter drier for moisture and dirt protection
- Safety and control devices for better system protection
- Thermally protected and permanently lubricated fan motors

SAFETY FEATURES

- A main circuit breaker to ensure the protection of the electronic components, in case of irregular power supply
- An Audiovisual alarm, for when the temperature deviates from the set temperature
- An overload protector to safeguard the compressor
- Compressor switch ON waiting time of 180 seconds
- Mobile alerts using GSM technology

PROGRAMMABLE LOGIC CONTROLLER (PLC) SYSTEM

A programmable logic controller (PLC) is a digital computer used for automation of controlling electromechanical processes, such as control of Temperature, Relative Humidity, Standby systems and event management with less maintenance hence no moving parts.

ALERT MANAGEMENT:

- SMS alert message can be send to 5 users with notifications
- Email alert can be sent to 15 users with notifications
- Call alert can be send to 5 users with voice messages with notifications

- 4.3" HMI with color Display and touch screen
- Configurable access for 72 users
- Privilege based grouping
- Multi level Password protected Human Machine Interface (HMI)
- Data storage to record set values, process values, date & time with variable time intervals
- High speed Ethernet connectivity
- incorrect password attempt and user lock
- Online data can be printed with date and time stamp
- Non operational screen auto logout
- Configurable maintenance reminder pop up alarm
- Individual Alfa numeric user ID and password
- User operation will be recorded and saved in memory
- Online and offline Log reports on HMI
- Safety cut off for over shoot and under shoot
- Programmable alarms with event management
- Precise control of temperature by using PID control Action
- Data storage capacity up to 200000 readings
- Self diagnostic system with error messages

TEMPERATURE CONTROL SYSTEM

- Micro-control based Temperature controller
- 4 digit, 7 segment LED display
- Audio visual alarm when the temperature
- deviates from the set temperature.
- Password protected keypad lock
- Visual alarm for Sensor faulty
- Display of set temperature and process temperature
- Temperature alarm system with adjustable high-low alarm limits.

  Micro-controller controls the internal temperature within ± 1.0 °C.

PRINCIPAL CHARACTERISTICS

- The adjustable solid stainless-steel wire mesh trays ensure an even temperature distribution
- The device consists of high-quality PT-100 Sensors for better accuracy
- The device consists of caster wheels that help easy mobility
- The foamed in place CFC free PUF ensures the reduction of power consumption and increased temperature stability
- Various accessories available that align with the device

TECHNICAL SPECIFICATIONS				
Model No.	AVI-125A	AVI-125B	AVI-125C	AVI-125D
	AVI-125-G	AVI-125B-G	AVI-125C-G	AVI-125D-G
	AVI-125A-P	AVI-125B-P	AVI-125C-P	AVI-125D-P
	AVI-125A-GP	AVI-125B-GP	AVI-125C-GP	AVI-125D-GP
Temperature Range (°C)	–40 to –80.0			
Accuracy (°C)	± 1.0			
Uniformity (°C)	± 5.0			
Control system	Micro control / PLC			
Volume (Liters)	90	170	290	350
Trays	2	3	3	4
Power (W)	400	600	750	1000
Voltage (VAC)	230 , 50/ 60Hz			
DIMENSIONS (W X D X H) IN CM AND WEIGHT (KG)				
Inner Size	42x38x57	49x42x85	58x50x102	58x57x106
External Size	67x71x141	75x76x169	83x83x190	83x90x197
Size with packing	82x86x156	90x91x184	98x98x205	98x105x212
Net Weight	125	150	175	225
Gross weight	150	200	225	250

NB: P– Models are with Programmable logic control (PLC)
        G– Models are made out of Stainless steel 304 (GMP)

AVANTE DATALINX SOFTWARE

Title 21 CFR Part 11 is the part of Title 21 of the Code of Federal Regulations that establishes the United States Food and Drug Administration (FDA) regulations on electronic records and electronic signatures (ERES). Part 11, as it is commonly called, defines the criteria under which electronic records and electronic signatures are considered trustworthy, reliable, and equivalent to paper records.

- 21CFR-PART 11 compliance.
- Browser based software
- Multiple chamber data acquisition on single software.
- Reports in Tabular and Graphical form
- Mean Kinetic Temperature Report.
- Automatic Back up Provision.
- Privilege based Group creation
- Privilege based user creation
- Trend analysis report
- Equipment audit trial report

- User ID with Alfa numeric password protection
- Multi user environment (LAN)
- Multiple level password with automatic expiry
- Electronic signature
- Separate reports for alarm and events
- Remote integrations with Control systems.
- Software audit trial report
- Email, SMS and call alert in case of system failure
- Online and offline trends

OPTIONAL ACCESSORIES

TEMPERATURE DATA SCANNERS

8 /16 Channel programmable temperature Data Scanner for record, store and print the data online and off line with variable print time intervals, suitable for 80 col. Dot matrix printer.

PLC SYSTEM

Programmable Logic Control with Safety controller, auto changeover of Standby systems & other event managements With
4.3" Color HMI with touch screen, Ethernet connectivity and security lock for prevention of unauthorized tampering.

PC INTERFACE COMMUNICATION

Micro controller based PID controller to record, store and print the set values, process values, Date & time with variable print time intervals with RS-485 communications for PC interface

SOFTWARE

Avante "DATALINX" CFR 21 Part 11 compliance communication software for data management. Complete with RS- 485 multi dropping to monitor multiple chambers to one software

MOBILE ALERT

Mobile alert via GSM Technology in case of system failure

POWER BACKUP

Uninterrupted online power supply for PLC in case of power failure

TRAYS

Additional tray suitable for above equipment as per your requirement

Door access

Biometric magnetic door access for secured door opening with software to maintain log record

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CALIBRATION

The equipment is calibrated with the help of master calibrator, which is certified for its accuracy by Electronics Regional Testing Laboratory (ERTL West) Government of India recognized testing laboratory with reference to National Physical Laboratories (NPL).

DOCUMENTATION

For GMP complaint models Avante offers IQ, OQ and PQ validation with documentation, reports, calibration and test certificates.

SERVICE AND SUPPORT

The training undertaken by our Channel partners and engineers is of the highest standard in the industry, ensuring that our customers are supported by the highest level of technical expertise and as such can be assured that their equipment will perform to the standards required at all times.

Our wide network of Engineers/Technicians enables us to respond to any technical query, ensuring that our customers receive the maximum benefit from their equipment.

NB: Specifications are subject to change without prior notice.

S --> Standard Model

STANDARD MODEL

Inner made of ceramic pot, Outer case made from thick gauge Mild Steel (CRCA) sheet.

G --> GMP Model

GMP MODEL

Inner made of ceramic pot, Outer case made from thick gaug Stainless Steel(S.S.304).

Note: The design, color, specification, and models are subject to transformation due to ending research, development, and technological advances.

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