

COOLING INCUBATOR

AVI-129 SERIES



The major purpose of cooling incubators is to conduct life cycle testing. An incubator uniformly maintains the temperature, humidity and other atmospheric conditions like the content of CO₂ and oxygen in the air. The history of warm incubators goes back to ancient China and Egypt.

During a variety of testing procedures, the protocols demand a wide range of high precision, automatic temperature control to analyse the overall functioning of a product sample across various environments. This type of precise functioning of products is an integral part of lab testing and research-based activities. Cooling incubators are a reliable option for many such lab testing procedures.

Avante cooling incubators are temperature controllers, based on micro controlling technology with an adjustable temperature range of 5.0°C to 60.0°C. These incubators are known for their precision and reliability in conducting seed tests, doing biological studies, etc.

CONCEPTION

Avante manufactures high-density cabinets insulated with CFC free Polyurethane Foam. The interiors are constructed using stainless Steel (304 SS, 0.8 mm thick) with a mirror finish. The exterior consists of white powder-coated (1.0 mm thick) with mild steel. The doors are keyed and have a magnetic gasket. Even distribution of temperature is ensured using special wire mesh trays made of stainless steel. These also help with storage inside the cabinet.

GMP models are designed in 100% stainless steel (Inside S. S 304 with a mirror finish and outside. S.S 304 dull finish). Inner S.S316 can be requested at extra cost.





REFRIGERATION SYSTEM

Avante provides refrigeration systems which are free of CFC, that provide ultimate cooling. Inside the chambers, there is a condensing unit. Avante is a manufacturer of condensing units that are highly capable of transferring heat with low power consumption.

- A filter dryer helps to keep moisture and dirt at bay
- High-quality transfer of heat is assured with the help of grooved copper tubes and slit aluminium fins
- System protection ensured with safety and control devices
- The motor of the fan is well-lubricated and thermally protected
- The CFC free refrigeration system makes this product eco-friendly

COOLING INCUBATORS FIND TEST APPLICATIONS IN

- Cell biology
- Laboratories
- Microbiology
- Refrigerated storage
- Shelf-life studies
- Seed testing

SAFEGUARDING TRAITS

- An MCB to prevent short-circuiting in case of abnormal power supply
- Audiovisual alarm that buzzes when the temperatures change from the set temperature
- Mobile alerts using GSM technology
- Overload protector that makes sure the compressor is safe
- Safety Cut-off when the temperature exceeds the limit of 60.0°C
- Time delay by 180 seconds for compressor switch when ON

CONTROL SYSTEM

- 4 digit, 7 segment LED Display
- Alarm setting: High and low modes along with programmable temperature setting
- Faulty sensor indication with a visual alarm
- Keypad lock with protection via password
- Premium PT- 100 sensor for assured results and accuracy
- Set and process value display screen
- Temperature controller that works based on micro-control



PRINCIPLE CHARACTERISTICS

- Easy moving of the machine with caster wheels
- Fluorescent LED lights to light up the chamber
- Nichrome wire heater made with stainless steel in a U-shape
- Premium PT-100 sensor to ensure the correctness of results
- Stable temperature and energy efficiency ensured with foamed in place CFC PUC insulation
- The uniformity of temperature inside the oven and quick recovery after the doors are opened is guaranteed using Unidirectional airflow system
- The stainless steel wire mesh trays are designed to make sure the heat inside gets evenly distributed

DISCRETIONARY ACCESSORIES

PLC System

Programmable Logic Control system comes with a safety controller, auto conversion of Standby systems and several other procedures handling options. It also includes ethernet connectivity, security locks to avoid unauthorised alterations and a 4.3 Colour HMI with a touchscreen.

Data scanner

This data scanner can be used to record, store or print data, online and offline, with different print intervals. The data scanner is Eight/Sixteen channel programmable temperature Data Scanner which is suitable for an 80 col. Dot Matrix Printer.

Standby refrigeration system

A ready to use standby refrigeration system that can replace the normal system in case there is a failure in the functioning (for 600L and above). Comes with a compressor, evaporator, condensers and other additional accessories.

PC Interface Communication

This includes a PID controller based on a microcontroller to record, store, print the set values and process values. It also shows date and time with different print timings with RS-485 communication.

Software (no information available)

Timer

999 hours programmable cyclic timer to keep various conditions under check. The timer is microcontroller based.



Light bank helps to light up the entire chamber for ease of photosynthesis studies.

Ultra violet lamp UV- C Lamp that lights up the interiors and ensures sterilization.

Mobile alert The mobile alerts are sent using GSM technology in case of any power disruption.

Door access Biometric magnetic door with PC interface communication to ensure safety while door opening.

Power backup In case of power failure, the uninterrupted online power supply is provided for PLC.

Trays Extra trays as per your requirements. To fit the equipment mentioned above

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



TECHNICAL DATA

Models	AVI-129A	AVI-129B	AVI-129C	AVI-129D	AVI-129E	AVI-129F	AVI-129G	AVI-129H	AVI-129I
	AVI-129A-G	AVI-129B-G	AVI-129C-G	AVI-129D-G	AVI-129E-G	AVI-129F-G	AVI-129G-G	AVI-129H-G	AVI-129I-G
	AVI-129A-P	AVI-129B-P	AVI-129C-P	AVI-129D-P	AVI-129E-P	AVI-129F-P	AVI-129G-P	AVI-129H-P	AVI-129I-P
	AVI-129A-GP	AVI-129B-GP	AVI-129C-GP	AVI-129D-GP	AVI-129E-GP	AVI-129F-GP	AVI-129G-GP	AVI-129H-GP	AVI-129I-GP
Volume	100 Liters	200 Liters	300 Liters	400 Liters	600 Liters	800 Liters	1000 Liters	1500 Liters	2000 Liters
Temperature Range	5.0 -60.0 °C								
Accuracy	± 0.5 °C								
Uniformity	±1.0 °C								
Control system	Micro control / PLC								
No. Doors	Single	Single	Single	Single	Single	Double	Double	Double	Double
No. Of tray	2	3	4	4	4	8	8	10	10
Power	775 W	775 W	775 W	800 W	1150 W	1500 W	2300 W	2300 W	2300 W
Voltage	230 ACV , 50/60Hz								
DIMENSIONS (W X D X H) IN MM AND WEIGHT (KG)									
Internal Dim	435x400x600	505x400x1005	565x450x1205	635x530x1205	745x670x1205	1120x600x1205	1150x670x1300	1300x890x1300	1500x1030x1300
External Dia	580x845x1275	650x880x1680	710x935x1885	780x1010x1880	890x1150x1960	1370x1075x1920	1400x1145x1920	1550x1365x1920	1750x1505x1920
Packing size	707x972x1478	777x1007x1883	837x1062x2088	907x1137x2083	1017x1277x2163	1497x1202x2123	1527x1272x2123	1677x1492x2123	1877x1632x2123
Net Weight	120	145	200	255	280	310	335	360	380
Gross Weight	175	225	275	325	350	400	425	450	480

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

India

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