CO₂ INCUBATOR

ABOUT THE COMPANY

iGene Labserve Pvt. Ltd. is gaining recognition by offering resilient, innovative solutions in laboratory instrumentation across healthcare, genomics, drug discovery, biopharma, and food & beverage sectors. We strive to enhance lab efficacy and reduce challenges through advanced technologies and a diverse product portfolio tailored to our customers' needs.

IG-CO₂ SERIES INCUBATOR

The IG-CO₂ Series Incubators are expertly crafted to create a controlled environment that mimics natural conditions for growing cells and tissues. Featuring advanced 6-side direct heat technology, they provide consistent and uniform heating throughout the chamber. Coupled with precise temperature control and CO2 level regulation, these incubators ensure a stable and ideal atmosphere for cell culture.

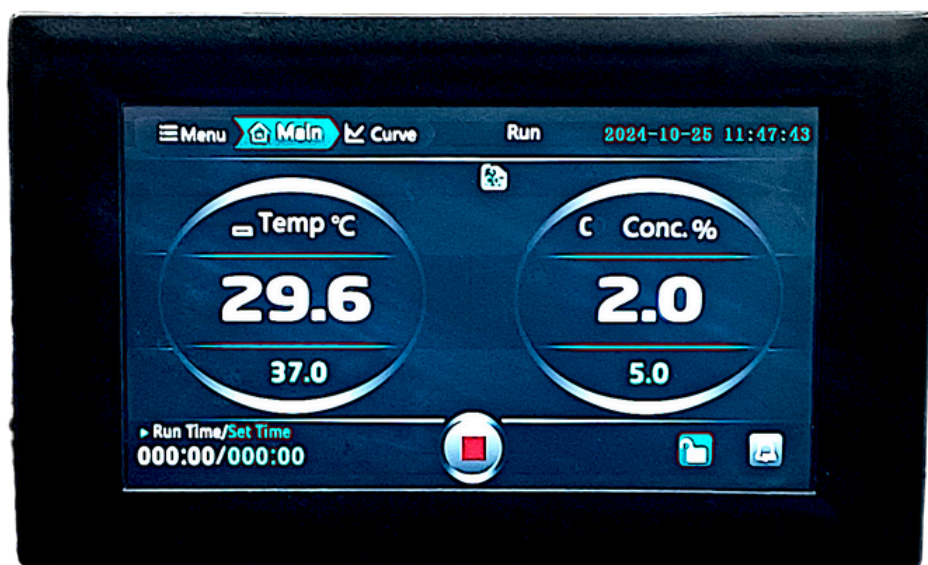## KEY FEATURES OF THE IG-CO₂ SERIES INCUBATOR

- **6-Side Direct Heat Chamber:** Ensures uniform temperature distribution with six-sided heating. The temperature field stabilizes at ±0.1°C, creating an ideal environment for cell and tissue cultivation.
- **Polished Stainless Steel Interior**: The one-piece, polished stainless-steel chamber is designed for easy cleaning. Rounded corners and removable stainless-steel shelves allow for quick maintenance without tools.
- **Detachable Humidity Pan:** A 304 stainless steel water pan with a 4-liter capacity maintains a high-humidity environment.
- **Versatile Sterilization Options:** Choose between UV sterilization or high heat sterilization at 140°C or 180°C, offering flexible and powerful sterilization options for hygiene and safety.
- **ISO Class 5 HEPA-Filtered Airflow System:** Integrated HEPA filtration achieves ISO Class 5 air quality within 5 minutes of closing the door, continuously protecting against airborne contaminants.
- **Infrared (IR) CO2 Sensor:** Provides accurate CO2 concentration monitoring, minimizing errors from humidity or temperature fluctuations, especially useful for frequent door openings.
- **Active Airflow Technology:** Fan-assisted airflow ensures rapid recovery of temperature and gas conditions, maintaining a consistent environment throughout the chamber.
- **5-Inch LCD Touchscreen:** A user-friendly touchscreen offers intuitive controls for settings, with audible/visual alarms, historical data display, and USB data export options.
- **Energy Efficiency:** Optimized for lower gas and heat consumption, with faster recovery times and efficient management for various sample types.
- **Condensation Prevention:** Heating elements around the front door and frame eliminate condensation buildup on the chamber and glass door.
- **Microprocessor PID Control:** Advanced control system for regulating CO2 levels, temperature, and alarms, ensuring precise operation.
- **Overheating Protection:** A safety feature automatically cuts off heating if the temperature exceeds the set limit or if the control system malfunctions.
- **Optional High-Precision Solid-State Oxygen Sensors:** Adjustable from ultra-low 0.0%-0.1% to 20%, providing flexible performance options.
- **Double-Walled Modular Design:** Features 3-inch thick glass wool blanket insulation for superior temperature retention and energy efficiency.
- **Microbial Filters:** Equipped with microbial filters on all gas inlets, outlets, and sample ports to minimize potential sources of contamination.
- **Robust Components:** Door hinges, associated cables, and other accessories are robust and have undergone stringent testing for durability.
- **Steel Shelves:** Includes a minimum of three (3) steel shelves for efficient storage and organization.
- **Active Airflow Technology:** Air jacketed CO2 incubator features fan-assisted airflow for rapid recovery of temperature and gas conditions.

SPECIFICATION

Item Name	CO₂ Incubator					
Model No.	IG-CO280UV	IG-CO280H	IG-CO280HH	IG-CO2180UV	IG-CO2180H	IG-CO2180HH
Sterilization	UV	140°C	180°C	UV	140°C	180°C
Volume	80L	80L	80L	180L	180L	180L
Microprocessor-based controller	Proprietary algorithm to control CO2 and temperature					
Display	LCD touch display					
Temp control range	Ambient +5°C- 60°C					
Temp stability	±0.1°C					
Temperature accuracy	±0.4°C at 37°C					
Temp field uniformity	±0.3°C (at 37°C)					
Timer function	0 - 999hr 59 min.					
CO2 measurement principle	Infrared (IR) detection					
CO2 control range	0-20%					
CO2 display resolution	0.10%					
CO2 increment	Increment of 0.1%, accuracy: ±0.3%					
CO2 Stability	± 0.1%					
CO2 gas uniformity	± 0.1% across the chamber					
CO2 supply	0.05~0.1MPa is recommended					
Relative Humidity	Ambient humidity ~95% at 37°C					
HEPA filtration	HEPA filters at the gas inlet, ISO 5 level, 5 minutes					
Temperature recovery time	≤10 min (open door 30sec room temperature 25°C set value 37°C)					
CO2 concentration recovery time	≤5 min (open the door 30sec set value 5%)					
MOC	The inner chamber is made up of stainless steel and outer chamber with MS with powder coating					
Light	Florescent light					
Historical data storage	250,000 messages					
Data export interface	USB interface					
Scalability	Up to 2 units can be stacked.					
Working environment temperature	18~30°C					
Power supply	230V±10%, 50~60Hz					
Inner Dimensions (L x D x H) mm	440 x 400 x 500			530 x 535 x 670		
Outer Dimensions (L x D x H) mm	580 x 516 x 872			660 x 652 x 1030		

MICROPROCESSOR-BASED CONTROLLER

- **LCD touch display:** Features a user-friendly LCD touch display for easy operation.
- **Temperature control range:** From ambient +5°C to 60°C, with temperature stability maintained at ±0.1°C for precise conditions.
- **CO_2 control range:** Adjustable between 0% and 20% with a CO_2 display resolution accurate to 0.10%, providing precise monitoring.
- **User Profiles:** Includes three user roles—Administrator, Tester, and Operator. Access is password-protected:
    - o **Administrator:** Full access to all parameters and settings.
    - o **Tester:** Access to all functions except for changing running parameters.
    - o **Operator:** Limited access to operate and run parameters set by the Administrator.
- **Timer:** Programmable timer ranging from 0 to 999 hours and 59 minutes.
- **Custom Programming:** Users can set and store programs according to specific protocols, ensuring flexible operation.
- **Pre-scheduling of programs:** Allows pre-scheduling of programs and timers for future operations.
- **Data Management:** Historical data can be viewed, stored, and exported using a USB drive for easy access and analysis.
- **Alarm System:** Alerts for low and high temperature and deviations in CO_2 concentration (high or low) from set values, ensuring safety and precision.
- **Real-Time Monitoring:** Displays real-time curves of CO_2 levels and temperature throughout the operation, providing comprehensive monitoring.
- **Printer Connectivity:** Supports connection to printers for printing running data and other essential parameters.
- **Screen lock feature:** Secures settings and prevents unauthorized access during operation.

iGENE LABSERVE ®

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