

# CDI - 3188

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## Carbon Dioxide Incubator



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

**Analytical Technologies Limited**

An ISO 9001 Certified Company

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CO<sub>2</sub> incubators are highly recommended for scientific research to grow and maintain cell cultures in vitro. A CO<sub>2</sub> incubator operates on simple parameters depending on 3 parameters, carbon dioxide, Temperature & Relative Humidity. Precision of the CO<sub>2</sub> incubator is of crucial & high importance as the smallest deviation in the CO<sub>2</sub> atmosphere, temperature or humidity parameters during cell cultivation or any scientific research or experiment can affect the cell development & may cause unexpected changes.

### **CO<sub>2</sub> incubators**

- Sleek, reliable & versatile
- Easy to use
- HEPA filters
- Less maintenance
- Energy efficient
- User friendly
- Microprocessor based Controller

### **Applications include**

- Tissue engineering
- Cell culture
- In vitro fertilization
- Neuroscience
- Cancer research
- Other mammalian cell research

### **Construction**

- Inner chamber is made up of high grade stainless steel SS-304
- Outer chamber is made up of mild steel duly powder coated.
- Tray is also supplied to make the shelves inside the chamber.
- Glass Wool Insulation: 75 mm insulation to reduce heat losses in cabinet for better sensitivity and economical operations with minimal impact on the environment.
- Forced air circulation in the chamber by a blower ensures uniform temperature and humidity inside the chamber.
- Door: is provided with magnetic door closer and its outer body is made of powder coated MS and inner is made of SS-304.
- Carbon Dioxide can be provided inside the chamber through an inlet nozzle provided on the cabinet through a CO<sub>2</sub> cylinder. The gas flow can be regulated by using flow control valve with CO<sub>2</sub> regulator. Air can be admitted through nozzle fixed on the cabinet.

**Temperature Range:** 4°C

**Temperature uniformity:** ± 0.35°C above ambient to 50°C at 37°C ± 0.5°C

**Temperature Sensor:** PT 100

**Temperature Control:** Temperature inside the chamber is controlled by intelligent programmable temperature controller and indicator and the controller is based on the microcontroller nano watt technology.

**Heating:** is done with ISI marked strip type heaters placed around the inner chamber. The warm air is evenly distributed throughout the chamber through efficient motor fans ensuring very good temperature sensitivity

**Air Circulation:** Circulated by ISI mark silicon winded motors which are connected to balanced blowers.

**CO2 Control system:** these Incubator use a microprocessor based, non-dispersive infrared CO2 sensor. The amount of energy diffused to the detector is an exact logarithmic function of the CO2 concentration in the gas between source and detector. The wavelengths used are absorbed by a filter in the CO2 bandwidth making the measurements insensitive to other components, such as water vapor. Advanced design provides a very stable drift-free output requiring less frequent calibration. The sensor is within the chamber air plenum so very accurate CO2 control is achieved.

**CO2 Concentration Range:** 0.1-20%

**CO2 Control Accuracy:**  $\pm 1\%$

## Technical Matrix:

**Capacity :** 170 Liter

**No. of shelves (supplied)** 3 Nos. Perforated 1.5 mm thickness

**Temperature Range** 4°C above ambient to 50°C

**Temperature Controller** HMI+PLC based Controller

**Temperature Accuracy**  $\pm 0.4^\circ\text{C}$  at 37°C

**Temperature Uniformity**  $\pm 0.3\text{C}$  at 37C

**Temperature Stability**  $\pm 0.1\text{C}$  at 37C

**Temperature sensor** PT-100

**Display** LED/LCD

**Heating system** Direct heating system  
Air-Jacketed

**CO2 Range** 0.1-20%

**Accuracy**  $\pm 0.1\%$

**Sensor** infrared CO2 sensor

**Rate**  $\leq 5$ minutes

**Humidity** Up to 95%

**Water reservoir system** 3 liters

**Insulation** 75 mm (Glass Wool)

**Servo Stabilizer** 3 kVA

**USB Port** For data logging facility

**Power supply** 220 V, Single Phase 50/60Hz

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**HPLC Servicing** :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

**Trainings** :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.

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**Validations** :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

**Instruments** :Instruments :We offer instruments/Renting Services Modules like pumps,detector etc. on Rent.



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Chromatograph  
3007



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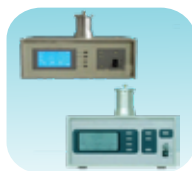
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Hematology  
Analyzer



Micro Plate  
Reader/Washer



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Carbon 3800



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Ion Chromatograph



Water purification  
system

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2. Improving quality of life by offering YOGA Training courses, Work shops/Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds,souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

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