

NSW-624, CO2 Incubator

Narang Scientific Works Pvt. Ltd. is the leading manufacturer of Incubators as well as CO2 Incubators. With expertise's in design and engineering and end to end range of solutions and a penchant for customer service. NSW provides best-in class technology for customers worldwide. NSW has customers in Middle East, Europe, in addition to a fast-growing market share across India & Asia. Preference to quality has been our way of life at Narang Scientific Works Pvt. Ltd. and this is the reason why we have a commanding position in the market. We as manufacturers believe in creating a goodwill rather than earning short term profits hence our products are never found to be below standard quality measures.

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INTRODUCTION

CO2 incubators are widely used in scientific research to grow and maintain cell cultures. A Heal Force Co2 incubator provides you with unsurpassed natural simulation to ensure optimum growth conditions for your culture at all time. That's why they become the first choice of researchers in fields of application include tissue engineering, in vitro fertilization, neuroscience, cancer research and other mammalian cell research.

Cell cultivation in particular is a highly sensitive process in which bacteria, viruses, fungal spores and mycoplasmas can destroy valuable cultures or distort test results, causing more work. Heal Force solves this problem using a unique design and effective method to ensure sterile conditions

FEATURES & BENEFITS

- Air jacketed construction
- Microprocessor based controller
- 0.3μ HEPA CO2 inlet filter
- Precise CO2 control and fast recovery
- Automatic start function
- Toughened glass observation door
- Corrosion free powder coated cabinet
- Stainless steel 304 internal chamber
- Rounded internal corners for easy cleaning



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EASY-TO-CLEAN DESIGN The cleaning process is significantly simplified by Heal Force's unique, seamless, deep-drawn interior chamber, which reduces any areas where contamination could accumulate. Heal Force incubators offer the best usable-space-to-volume ratio due to the total absence of any additional fittings in the interior chamber

INLET FILTER FOR CO2 SUPPLY All gas injection lines are filtered via HEPA filter to remove impurities and contaminants before being injected into the chamber. The HEPA filter is able to filter particles larger than 0.3µm at 99.998%.

ABSOLUTELY CONDENSATION-FREE, EVEN AT HIGH AIR HUMIDITY LEVEL The high air humidity prevents cell cultures from drying out and also keeps the osmolarity constant in the culture medium. With our CO2 incubators, you can work with air humidity up to 95% while the internal walls remain completely dry (In order to prevent contamination, however, no condensation must occur). The patented tilted water reservoir system keeps the air humidity absolutely stable

OPTIMUM TEMPERATURE CONTROL A reliable air jacketed heating system combined with PT100 temperature sensors ensures high precision with homogenous heat distribution in the interior. Outstanding dynamics ensure short recovery times and balance out any fluctuations caused by door open for Heal Force CO2 incubators. This provides reliable protection at any time, particularly for sensitive cultures.

DIVIDED, INNER GLASS DOOR Three inner glass doors maintain stable climatic conditions, minimizes any changes to the humidity, heat and gas concentration, shortens recovery times significantly and also further reduces the risk of contamination. Six half-size sealed inner glass doors and shelves are optional. This makes it possible for several users to work with the same equipment

AUTO-START FUNCTION The auto-start function, which considerably simplifies the equipment's operation, contains the incubator's automatic start-up and the measuring system's calibration. The thermal conductivity CO2 sensor has its baseline automatically reset without manual adjustment. The incubator can be loaded immediately after the start-up routine is completed.

DETAILED DESCRIPTION

CONSTRUCTION: CO2 Incubator equipped with double-walled construction with high-grade PUF insulation. Inner chamber is made of stainless steel 304 with rounded (coved) corners; while exterior is powder coated and painted for corrosion free performance.

JACKET TYPE : These CO2 incubators are available in both Air Jacket and Water Jacket.

DOOR: Each CO2 incubator comes with inner glass doors and outer door. Inner glass door keeps maintain stable environment and minimizes changes to humidity, temperature and CO2 concentration; moreover shortens recovery time and reduces risk of contamination.



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TRAYS: 3 nos. perforated stainless steel trays are provided with each CO2 incubator that are removable and height adjustable.

CO2 RANGE: CO2 range is 0 to 20% with $\pm 0.1\%$ stability and uniformity of $\pm 0.2\%$. Operate on a gas inlet pressure of 0.05–0.1 MPa.

HUMIDITY: Air humidity remains up to 95%, which keeps cell cultures safe from drying out. For humidity, distilled water is kept at bottom of the chamber.

TEMPERATURE: Temperature range is 5 to 50°C. PT100 temperature sensor ensures excellent accuracy.

AIR FILTER: A 0.3 μ HEPA filter is fitted at inlet of CO2 gas injection system to keep away impurities and contaminations from entering into chamber.

ALARM: There are alarms for power interruption, High/low temperature variation, deviation of CO2, RH, door ajar and independent over heat protection.

MAKE	NSW	
Model	CI-2	CI-1
Capacity	80 Litre	170 Litre
Inner dimensions (W x D x H)	405x455x455 mm	489x 522x 664 mm
Temperature range	5 to 50°C	
Temperature accuracy	$\pm 0.1^\circ\text{C}$ at 37 °C	
Temperature stability	$\pm 0.1^\circ\text{C}$ at 37°C	
CO2 RANGE	CO2 range is 0 to 20% with $\pm 0.1\%$ stability and uniformity of $\pm 0.2\%$.	
Gas uniformity	$\pm 0.1\%$ at set 5.0% CO2 concentration at 37 °C set temperature	
CO2 recovery rate	At least of 6 min after door opening and closing event to attain 5% CO2	
Minimum Time taken for CO2 recovery rate after door opening	6	

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Outer	Powder coated GI Sheet
Inner	Stainless steel 304
Insulation	PUF
Outer door	Solid Outer w/ clamp handle
Observation door	Toughened glass door
Door Gasket	Silicone rubber gasket
Tray	Perforated or wire mesh trays
CO2 Sensor	Dual beam IR
Illumination	LED light
Air circulation	Axial fan
Temperature control	Digital PID Controller CO2 percentage setting Temperature setting Humidity setting Display of SV & PV
Maximum temperature for Sensor functionality	180 °C during dry heat sterilizations
Dry Heat Sterilization temperature	180°C
Alarm	CO2 variation alarm Temperature variation alarm Humidity variation alarm CO ₂ high/low alarms Door-open alarm
Power supply	220 Volts 50Hz



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