Incubator

Venchal
Scientific

CO₂ Incubator

CE TÜV TUV AUSTRIA CERT GMBH CE Certified ISO 9001 JAS-ANZ ISO 13485 LL-C (Certification) GMP

Water Jacket & Air Jacket Model

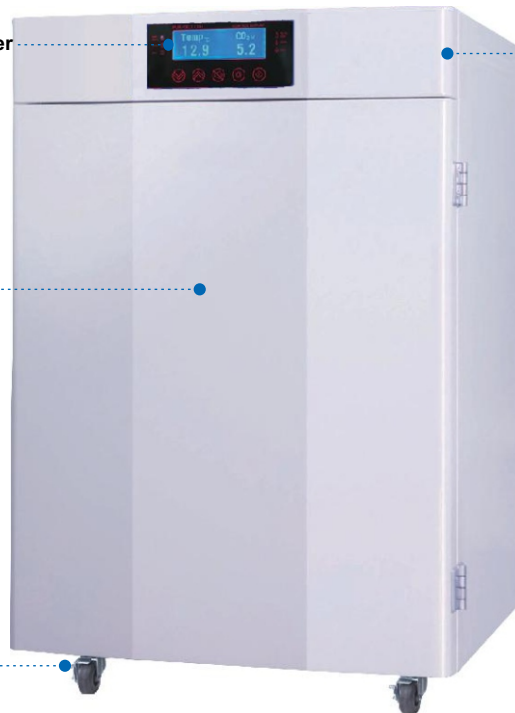Available to choose heating type according to user's preference

CO₂ incubator suitable for mammalian cell culture, where an elaborate pH level shall be achieved by controlling a CO₂ level (0~20%)

Providing stable culture environment through constant and even temperature distribution and precisely controllable CO2 gas
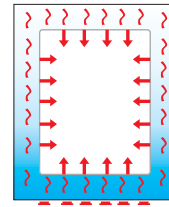
Microprocessor Digital PID Controller
Wide LCD display 240x64 graphic
Touch Screen Panel

CO₂ Gas Fitting
One touch fitting applied
Optional CO₂ gas fitting

Exterior Coating
Anti-corrision Liquid /
Powder Coating

Water Jacket Model :
Hot water indirectly transfers heat into the chamber and provides even temperature distribution.

As having higher heat capacity, water jacket is more insensitive and not affected easily by sudden temperature changes.
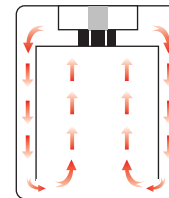
Air Jacket Model :
Hot air directly transfers heat into the chamber. Set point is reached quickly.

Heated upto 180℃ and autoclavable.

Caster Wheels

Water Jacket Model :

Water-Jacketed CO2 Incubator can maintain temperature by surrounding the chamber with hot walls generated from the heated water. The heated water circulates and radiates heat around the inner chamber which maintains constant temperature.

Water-Jacketed CO2 Incubator can hold the chamber temperature much longer when power is lost. The incubator will also be able to recover temperature much faster after a power failure and also gets back more quickly after door has been opened or changes in temperature settings.

Air Jacket Model :

CO2 Incubator uses Direct Heat / Air Jacketed Heating System which surrounds the inner chamber walls combined with natural convection airflow that radiate wall heat through thermal conduction.This technique achieves accurate, uniform and highly responsive temperature control within the chamber.

Optional Accessories :

GAS regulater (2stage)　　　CO₂ analyzer　　　HEPA filter　　　Thermal printer

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S c i e n t i f i c

CO2 Incubator

F eatures :

- **Microprocessor digital PID controller :**
  Precise temperature control is available in unit of $0.1°C$
  Precise CO_2 control is available in unit of 0.1% at 5% set
  Auto-tuning is applicable depending on temperature and humidity at site
- **NDIR sensor for CO_2 concentration :**
  Measurement and control of CO_2 concentration with high accuracy is
  possible through Non-dispersive dual beam infrared ray sensor (NDIR).
- **LCD screen displaying set information :**
  A wide 240 x 64 graphic in LCD screen makes user check the parameter at a glance.
  Touch panel along with LCD screen is equipped for easy setting of parameter
  Change of font size in the PV value depending on set menus.
- **Anti-corrosion materials :**
  Interior : The chamber is made of Stainless Steel (SUS 304) leads hygienic condition inside.
  Exterior : The Exterior is made of steel plates (Cr41) Anti-corrosion liquid / powder coating steel(Cr 41).
- **Fast temperature control by Air-jacket System :**
  Temperature is controlled by heating and circulating internal air, which enables
  to achieve to the set temperature quickly
- **Temperature controlled by water Jacket System :**
  The water jacket system is a water type system to insert water of high specific heat into a
  CO2 incubator chamber jacket with a view to maintaining its temperature.
- **Circulation Fans :**
  Circulation fans are equipped to minimize temperature deviations inside the chamber.
- **Height adjustable sliding shelves :**
  4 Perforated stainless shelves of adjustable height to put experiment objects on in multiple tiers.
- **Silicon Gasket seal :**
  The door is equipped with silicone gasket seal to minimize the injection of exterior air into the interior
- **Transparent Tempered Glass Door :**
  Inside door fabricated of tempered glass to observe the inside easily.
- **Alarm & Over Heating :**
  Multi functional alarm warning device and an over-heating prevention element.
- **Design :**
  Aesthetic design easy to open by using a door side.
- **Optional O_2 control function :**
  O_2 can also be controlled along with CO_2 in option model

Specifications :

Model No.	4181A	4182W
Inner Dimension (W x D x H)mm	540x500x680	
Outer Dimension (W x D x H)mm	653x639x965	
Capacity	180L	180L
Water Jacket	—	36L
Controller	Standard : Digital PID controller(240x64 Graphic LCD, Touch Button)	
Inside Material	Stainless steel plate 304	
Outside Material	Epoxy powder coated steel plate	
Shelf	Perforated stainless shelves 4EA (Total 10EA available)	
Temperature Range	Ambient $+5℃ \sim 50℃$	
Temperature Accuracy	$\pm 0.1℃$	
Sensor Type	$PT100\Omega$	
Temperature Control	Forced convection(Direct Heating)	
CO2 Range	0~20%	
CO2 Accuracy	$\pm 0.1\%$ at 5%	
CO2 Sensor	Dual beam NDIR sensor	
CO2 Inlet Pressure	0.2 Mpa 5L/min	
Humidification	Up to 95% RH at 37℃	
Power	AC 220~230V, 50/60Hz, 1Phase	
Power Consumption	880W	
Safety	Over heat protector, Fuse installed noise filter	
Weight	115 kg	

At any time, the manufacturer may bring modifications to the model above described, for technical or commercial reasons. The picture does not necessary shows the product in the standard version.