

CO₂ INCUBATOR (NB-203/NB-203XL/NB-203XXL)

The incubator is ideal for the experiments involving cultivation of animal cells, sperm/ovum, anaerobic cells, all types of microbe cells, hatching/germinating and special tissues.

LARGE
CO₂ INCUBATOR

MEDIUM
CO₂ INCUBATOR

MINI
CO₂ INCUBATOR

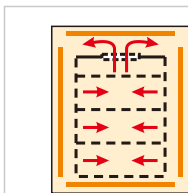


NB-203

NB-203XL

NB-203XXL

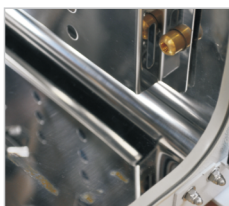
Special Features



Natural Air and Moisture Convection
Air and Moisture in chamber are distributed naturally by 6 side heating, air circulation fan.



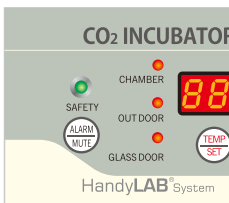
Perforated Shelves are good for natural air flows and are made of stainless steel which are resistant against rust and contamination.



Rounded Conner allows easy cleaning. Entire chamber is made of stainless steel(SUS304)



Access Port(Optional) for additional device used in chamber.



Alarm System

Buzzer to alarm low or high deviation of CO₂, Temperature.



Over Heating Limit. Heating is automatically cut by safety device when temperature control failed or there is excessive heating over set point.

Features

Fast Heat-Up, Fast-Recovery, Stable Control

- **6 Sides Direct Heating System**
Electric Heating wire is covered on all sides of chamber which makes stable uniformity and provides fast heat-up & temperature recovery. 3 parts of heating section are controlled and calibrated individually by 3 temperature sensors.
- **Dry Wall and Air Jacket**
Warm Air from heating wire is preserved in space between chamber and insulation. It helps temperature recovered faster and minimize heat loss. Dry wall with insulation is not required to regular maintenance.
- **DUAL BEAM IR CO₂ Sensor**
Fast & Precise Detection for CO₂ gas regardless of temperature and humidity.
- **Natural Humidification using Water Tray**
The heater on bottom side warm the water in tray and it makes humidification. Circulation fan deliver the moisture formed from the water in entire chamber.
- **No Condensation**
Heating by front door heater & frame heater prevent condensation in chamber and on glass door.
- **Microprocessor PID Control**
Intelligence Control for CO₂ density, Temperature, Alarm, Automatic Decontamination(Optional).
- **HEPA filtration of gas supply inlets**
- **Various Option**
Refer to page 21, various option such as decontamination, Oxygen Control is available in CO₂ incubators.
- **Customization**
Whenever user wants to have customized function and design, feel free to contact international sales dept. We will give the user best customization solution.



Stacked NB-203

Stacked NB-203XL

CO₂ INCUBATORS

Inside



Chamber inside NB-203



Chamber inside NB-203XXL



Chamber inside NB-203XL

Options

Customize your incubator with these options

<p>ACCESS PORT</p>	<p>25mm Access Port is available at left side. (Upon ordering and additional charge)</p>	<p>MULTI GAS CONTROL</p> <p>O₂</p>	<p>O₂ control Multi Gas Supply(N₂& O₂) is available for all CO₂ incubators. But, NB-203 is recommendable due to High Gas consumption when performing Hypoxia or Hypoxia.</p>
<p>UV STERILIZE</p> <p>UV</p>	<p>UV sterilization 4W UV is placed up of chamber ceiling and beside of circulation fan. The UV light is not reached to sample and sterilization is operated during culturing.</p>	<p>HOT AIR DECON</p> <p>120°C</p>	<p>Maximum 125°C Dry Hot Air in NB-203, NB-203XL Maximum 100°C Dry Hot Air in NB-203XXL. No need to remove IR CO₂ sensor</p>
<p>COOLING CONTROL</p>	<p>Peltier is applicable in NB-203 & NB-203XL. -5°C from room temperature but maximum lowest temperature is up to 20°C.</p>	<p>MONITORING SYSTEM</p>	<p>Monitoring System Using Internet network, Monitoring system has been designed to observe the status of equipments in real time even in the far distance.</p>
<p>COPPER CHAMBER</p>	<p>NBIOTEK customize chamber with oxidizing copper/copper-plated chamber for enhanced contamination protection.</p>	<p>SPLIT INNER DOOR</p>	<p>Lower Gas Consumption Lower Heat Loss Faster Recovery Easy Classification for Various samples. 5 Split Door for NB-203 6 Split Door for NB-203XL</p>

SPLIT INNER DOOR

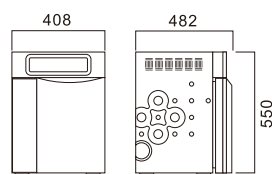


CO₂ INCUBATORS

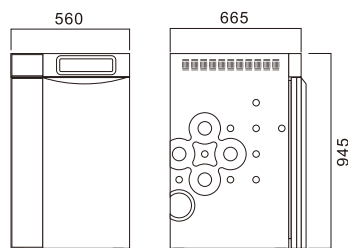


Specification

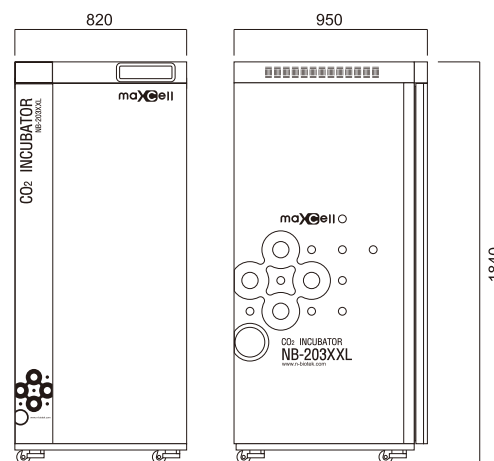
Items	Unit	NB-203	NB-203XL	NB-203XXL
Temperature				
range	°C	Ambient +5°C to 60°C	Ambient +5°C to 60°C	Ambient +5°C to 60°C
accuracy	°C	±0.25°C at 37°C	±0.25°C at 37°C	±0.5°C at 37°C
increment	°C	0.1°C	0.1°C	0.1°C
control		Microprocessor Digital PID	Microprocessor Digital PID	Microprocessor Digital PID
CO₂				
range	°C	0% to 20%	0% to 20%	0% to 20%
accuracy		±0.1% at 5% at 37°C	±0.1% at 5% at 37°C	±0.1% at 5% at 37°C
increment		0.1%	0.1%	0.1%
sensor		IR CO ₂ Sensor	IR CO ₂ Sensor	IR CO ₂ Sensor
control		Microprocessor	Microprocessor	Microprocessor
inlet pressure range		0.3~0.5bar	0.6~0.7bar	0.9~1.0bar
Door				
out door		Silicon Packing Magnet Door	Silicon Packing Magnet Door	Silicon Packing Magnet Door
inner door		Tempered Glass Door	Tempered Glass Door	Tempered Glass Door
Operating panel		Individual 2 Channel Touch Button	Individual 2 Channel Touch Button	Individual 2 Channel Touch Button
Display		LED Display	LED Display	LED Display
Jacket type		Dry Wall Type (6 sides heat)	Dry Wall Type (6 sides Heat)	Dry Wall Type (6 sides Heat)
Chamber material		Stainless Steel (304)	Stainless Steel (304)	Stainless Steel (304)
Chamber volume	liter	42 liter	179 liter	850 liter
Number of shelves		2ea (Max shelves 4ea)	3ea (Max Shelves 8ea)	3ea (Max Shelves 15ea)
Chamber dimension	mm	320(W)x350(D)x370(H)mm	473(W)x528(D)x710(H)mm	698(W)x799(D)x1528(H)mm
Overall dimension	mm	408(W)x482(D)x550(H)mm	560(W)x665(D)x945(H)mm	820(W)x950(D)x1840(H)mm
Power	V/Hz	110/220V, 50/60Hz, 400W	110/220V, 50/60Hz, 600W	110/220V, 50/60Hz, 1.2kW
Weight	kg	35kg	78kg	266kg



NB-203



NB-203XL



NB-203XXL





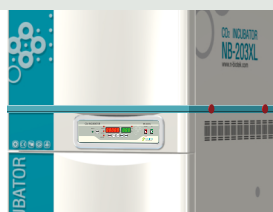
Option specification

Items	Unit	U.V DECONTAMINATION
Length	Nanometer	253.7nm
Power(Watt)	W	4GW/1ea

Items	Unit	DRY HOT AIR DECONTAMINATION
Temperature range		Max 125°C for NB-203, NB-203XL / Max 100°C for NB-203XXL Time 8 Hours Programmed Decontamination 3~4 Hours Recovery Time to re-set at 37°C and 5%
control		Safety Door Lock during Decontamination

Items	Unit	OXYGEN CONTROL (Hypoxia or Hypoxia)
Available in NB-203 and NB-203XL		
range		0.5~19% or 20~99%
sensor		Zirconium Dioxide Oxygen Sensor

Accessories

				
GAS Regulator	CO ₂ Analyzer	SHELVES	ROLLER BASE	STACKING KIT
NB-203 NB-203XL NB-203XXL	NB-203 NB-203XL NB-203XXL	NB-203 NB-203XL NB-203XXL	NB-203 NB-203XL	NB-203 NB-203XL