



CO2 INCUBATOR WATER JACKETED

CO2 INCUBATOR WATER JACKETED BGI1W6 BGI1W7 BGI1W8

CO2 INCUBATOR

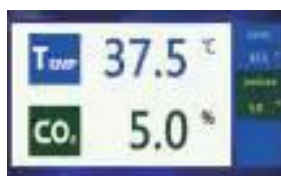


With Imported Infrared CO2 Sensor

- Touch screen controller, 72-hour machine operation record query function to help user tracking abnormal conditions and trace historical operation information.
- Faster CO2 concentration Restoration Speed.
- Infrared sensor can keep CO2 concentration stability and uniformity when door open frequently.
- Polished stainless-steel chamber, semicircular arcs at corners for easy cleaning(except water-jacketed type) , and the space between the shelves in the chamber is adjustable.
- Microorganism filter at inlet provides 99.99% filtration of bacteria and dust ($\Phi < 0.3\mu\text{m}$) and supplies pure CO2 into the incubator.
- Door temperature controller prevents dewfall on glass door of incubator effect

SPECIFICATIONS

Model	BGI1W6	BGI1W7	BGI1W8
Old Model	BCWJ-8301	BCWJ-8302	BCWJ-8303
Electrical Requirement	220V 50Hz		
Screen	7" Touch screen		
Power Consumption	500W	700W	1000W
Heating Method	Water-jacketed, PID Control		
Temperature Range	RT+5~55℃		
Ambient Temperature	+5~30℃		
Temperature Stability	±0.1℃		
CO ₂ Range	0~20% V/V		
CO ₂ Control Resolution	±0.1%(IR sensor)		
CO ₂ Recovery	(Door open 30s, recovery to 5%) ≤ 3min		
Temperature Recovery	(Door open 30s, recovery to 37℃) ≤ 8min		
Humidity Method	Natural vaporization ≥ 90%		
Chamber Volume	60L	170L	240L
Interior Dimension (WxDxH)mm	390x290x550	530x460x720	600x520x780
Exterior Dimension (WxDxH)mm	534x530x790	684x700x936	754x760x1020
Shelves	2(pcs)	3(pcs)	
Sterilization Method	UV Sterilizer		
Alt Name	CO2 Incubator		





FEATURES

With Imported Infrared CO2 Sensor

- Touch screen controller, 72-hour machine operation record query function to help user tracking abnormal conditions and trace historical operation information.
- Faster CO2 concentration Restoration Speed.
- Infrared sensor can keep CO2 concentration stability and uniformity when door open frequently.
- Polished stainless-steel chamber, semicircular arcs at corners for easy cleaning(except water-jacketed type) , and the space between the shelves in the chamber is adjustable.
- Microorganism filter at inlet provides 99.99% filtration of bacteria and dust ($\Phi < 0.3\mu\text{m}$) and supplies pure CO2 into the incubator.
- Door temperature controller prevents dewfall on glass door of incubator effectively.
- Independent audible and visible temperature-limiting alarm system ensures experiments run safely.
- Alarm function for temperature difference, CO2 over concentration and concentration difference, door open time, UV working status.
- Auto-controller of fan speed to prevent damage to the samples.
- 90°C high temperature and humidity streilization function.(RHP series)

Options

- RS485 Connector: easy to download and save all the data via RS-485 into computer, and identify problems in time.
- High effective filter provides filtration of bacteria and dust.
- CO2 pressure releasing valve.
- Humidity display system.
- Printer(Nested).
- Temperature-limiting alarm system.

CO2 INCUBATOR WATER JACKETED BFN1H1

CO2 INCUBATOR

Water-jacketed:

The large Size CO2 incubator incorporates a water jacketed system. Because of the heat retention characteristics of water, there is no sudden temperature change in the event of an unexpected power failure. A stable temperature environment is ensured.



HEPA filter:

It applies the long term effectiveness of the HEPA filter to protect your cultures. The filter is very efficient to entrap particulates larger than $0.3\mu\text{m}$ at 99.97%. The HEPA filter system runs continuously and within every 60 seconds, the volume of the entire chamber is disinfected. With help of HEPA filter, the air quality achieves Class 100 clean room levels within 5 minutes following a door opening.

Airflow system:

The optimized air flow system ensures the temperature and CO2 concentration to be stable and uniform within the chamber.

AUTO-ZERO/AUTO-START:

It combines precise CO2 control with a choice of TC or IR sensors. The microproc

SPECIFICATIONS

Model	BFN1H1
Old Model	BCWJ-302
Construction	
--Exterior dimensions (WxDxH, mm/inch)	655x656x1030 (mm) 25.8x25.8x40.5 (inch)
--Interior dimensions (WxDxH, mm/inch)	544x504x681 (mm) 21.4x19.8x26.8 (inch)
--Interior Volume (L/cu.ft)	185L / 6.5 cu.ft.
--Water Jacket volume	43.5L / 1.54 cu.ft.
--Net Weight	110kg / 242 lbs
--Interior Material	Type 304, mirror finish stainless steel
--Exterior Material	Cold-rolled steel, powder coated
--Inner door	One inner door standard
Temperature	
--Heating method	Water Jacket
--Temp. control system	Microprocessor
--Temp. sensor	PT1000
--Temp. range	5°C above ambient temperature to 55°C
--Temp. uniformity	±0.2°C
--Temp. stability	±0.1°C
CO ₂	
--Inlet pressure	0.1 MPa
--CO ₂ control system	Microprocessor
--CO ₂ sensor	Thermal conductivity / Infrared
--CO ₂ range	0 to 20%
--CO ₂ stability	±0.1%
Humidity	
--Humidifying system	Humidity pan
--Humidifying sensor	Standard
--Relative humidity	≥95%
--Display	In 0.1% increments
--Water reservoir volume	3L
Shelves	
--Shelf dimensions (WxD, mm/inch)	466x440 (mm) 18.3x17.3 (inch)
--Shelf construction	Type 304, mirror finish, stainless steel
--Standard/Maximum shelves	3, 11
Fittings	
--Access port	Standard
--Air filter	0.3µm, Efficiency: 99.998% (for CO ₂)
--Remote alarm contacts	Standard
De-contamination	HEPA filter system
Rated power	430W
Power supply	220V/50Hz (standard), 110V/60Hz (optional)
Alarm system	Power interruption * High/low temperature * Deviation of CO ₂ * RH * Door ajar * Independent overheat protection
Data output	RS232
Alt Name	CO ₂ Incubator

FEATURES

HEPA filter:

It applies the long term effectiveness of the HEPA filter to protect your cultures. The filter is very efficient to entrap particulates larger than 0.3 μ m at 99.97%. The HEPA filter system runs continuously and within every 60 seconds, the volume of the entire chamber is disinfected. With help of HEPA filter, the air quality achieves Class 100 clean room levels within 5 minutes following a door opening.

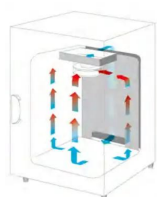


Airflow system:

The optimized air flow system ensures the temperature and CO₂ concentration to be stable and uniform within the chamber.

AUTO-ZERO/AUTO-START:

It combines precise CO₂ control with a choice of TC or IR sensors. The microprocessor will automatically "Zero" the incubator(IR type) using room air as a reference every 24 hours. Auto-start function for TC type ensures the sensor's baseline automatically reset without manual adjustment. These features will maintain an accurate CO₂ control without worrying about CO₂ drift.



HEPA filter and air flow pattern

Automatic control door heater:

The outer door incorporates a door heater which is interlocked with the surrounding temperature monitoring system. This prevents temperature differences between the chamber and the inner door, thereby preventing condensation.

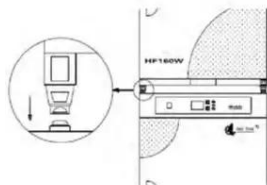
Humidity display and alarming system:

It is able to create a high humidity environment and the relative humidity (RH) is displayed on the panel, readable in 0.1% increments, including low RH programmable alarm(alerts you of need to add water)



Space Utility:

Stackable design takes up less space. Two or three units can be stacked according to available space and usage.



Automatic gas cylinder switchover system:

This system automatically switches from the primary to secondary gas cylinder when CO₂ gas level does not change while an injection valve is open.



CO2 INCUBATOR WATER JACKETED BGI2E1 BGI2E2

WATER JACKET CO2 INCUBATOR

The water jacket CO₂ incubator is designed for a long time stable culture. The control temp. is stable and accurate, suitable for the microorganisms culture with a long cycle and does not need to open the door often.



Intelligent touch screen controller:

Replace traditional button operation to touch screen interface.

It can display on the performance curve. You can check the temp., humidity (option) and CO₂ concentration three group curves changes at the same time.

And abnormal alarm and door open or close message.

When parameters are set, the controller will lock the screen automatically. It avoids unauthorized person wrong operation on the machine.

72 hours machine performance inquiry. It is convenient for user to check abnormal situation and track historical running information.

RS-485 communication port as options can be remote control on computer for monitoring the running and start or close the machine.

CO₂ concentration sensor:

SPECIFICATIONS

Model	BGI2E1	BGI2E2
Old Model	BCWJ-6701	BCWJ-6702
Electrical requirement	AC220V/50Hz	
Input power	700W	1000W
Heating power	Water Jacket	
Temp. control range	RT+5 - 50°C	
Work environment temp	+5 - 30°C	
Temp. accuracy	±0.1°C	
CO ₂ control range	0 - 20%	
CO ₂ control accuracy	±0.1% (IR sensor)	
CO ₂ restore time	(Door open 30s, recovery to 5%) ≤ 3min	
Temp. restore time	(Door open 30s, recovery to 37°C) ≤ 8min	
Related humidity	Nature vaporate > 95% (Can equip with related humidity digital display)	
Volume	170L	240L
Chamber size WxDxH (mm)	530x460x720	600x520x780
Overall size WxDxH (mm)	684x700x960	754x760x1020
Standard shelves qty	3 pcs	
Sterilization	UV sterilization + HEPA sterilization	
Alt Name	Water jacket CO2 incubator	

FEATURES

Intelligent touch screen controller:

Replace traditional button operation to touch screen interface.

It can display on the performance curve. You can check the temp., humidity (option) and CO₂ concentration three group curves changes at the same time.

And abnormal alarm and door open or close message.

When parameters are set, the controller will lock the screen automatically. It avoids unauthorized person wrong operation on the machine.

72 hours machine performance inquiry. It is convenient for user to check abnormal situation and track historical running information.

RS-485 communication port as options can be remote control on computer for monitoring the running and start or close the machine.



CO₂ concentration sensor:

You may need to open door frequently during experiment, Infrared sensor is the best choice under this circumstances. Our Infrared sensor is very sensitive to CO₂ concentration varies and it will not be affected by inside of incubator chamber conditions, measured accurately. It doesn't like traditional thermal probe that will be sensitive to chamber temp., and humidity that lead to incorrect CO₂ concentration data.

If open the door for 30s and close the door, within 3 min the CO₂ concentration can resume to the set value 5%. Even if there are many people use the same machine and frequently open and close door, the inside chamber can still maintain CO₂ concentration stable and uniform.

Temperature control and monitoring system:

A. Incubator temperature control system

PT100 temp. sensor keeps inside chamber temperature accurate. It can adjust the heating power according to the temp. differences between actual temp. in the chamber and set temp. to make sure temp. in the chamber is accurate. It can resume experiment temp. in 3 min after user open and close door to take samples.

B. Water jacket heating system

Water jacket heating method to ensure working chamber temperature is uniform, when it is power off, the chamber can maintain the temp. for a long time.

C. Door heating system

Outer door ring has heating function. The temperature of door ring will be a little bit higher than temp. in the chamber to prevent

condensed water coming from the inner glass door. It facilitates observe the experiment process, also it can avoid the biological pollution possibility due to the condensed water from the inner glass door.

D. Over temp. protection system

It is an independent backup temp. control system besides the CO₂ incubator temp. control system. When the incubator temp. control system failed and caused temp. loss control, the chamber temp. reaches to the over temp. limited set value, over temp. protection system will cut down the heating and alarm audible with light.

Documentation and failure diagnostic display (Option):

All data can be stored through RS485 port, if full functions. User can read the diagnostic situation and data from computer at any time.

Pollution proof control:

A. Ultraviolet sterilization

The ultraviolet lamp is placed at the back top of the chamber. It can sterilize the chamber regularly. It kills chamber recycle air bacteria and float bacteria from water tray or slop water in the bottom, effectively prevent pollution during cell culture period.

B. HEPA efficient filters

The CO₂ gas quality is an important factor to judge cell culture. In the CO₂ Incubator, HEPA high efficient filters can filter bacteria and dust in the air. It eliminates cross contamination from outer air to incubator chamber and keep the chamber inside aseptic. Close the door for 5 min, inside air can fast resume to hundred grade clean. HEPA air filter is easy to disassemble without any special instruments.



C. Micro biological HEPA filter

CO₂ access port equips micro biological HEPA filter, it can filters diameter $\geq 0.3\mu\text{m}$ Particles like CO₂ gas, bacteria and dust, the efficient reaches to 99.99%.



Cycle fan speed adjustable automatically

Cycle fan speed can be adjusted automatically. When chamber temp. is stable, the fan speed will be lower down, the speed will be adjusted to a suitable speed that the cell can grow with. It avoids the fast fan speed that evaporating the samples.

CO₂ inlet control system

We supply pressure release valve together with the equipment. It can control the pressure stable.

The system has pressure protection function. It prevents over pressure or low pressure to the pipes.

Safe Functions:

High and low temp. and over temp. alarm

Door temp. sensor failure alarm

CO₂ condensation too high or too low alarm

Door open too long alarm

Chamber sensor failure alarm

Over temp sensor failure alarm

Independent temp. limiter alarm

Disinfection and sterilization status reminder



Biolab Scientific Ltd.

Trillium Executive Center, East Tower, 675 Cochrane Dr, Markham, Ontario L3R 0B8, Canada
Email: info@biolabscientific.com | Website: www.biolabscientific.com