



## CO2 INCUBATOR WATER JACKETED BCWJ-6701

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## WATER JACKET CO2 INCUBATOR

The water jacket CO<sub>2</sub> 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 CO<sub>2</sub> 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.

CO<sub>2</sub> concentration sensor:

## SPECIFICATIONS

Model	BCWJ-6701
sku	BCWJ-6701
Electrical requirement	AC220V/50Hz
Input power	700W
Heating power	Water Jacket
Temp. control range	RT+5 - 50°C
Work environment temp	+5 - 30°C
Temp. accuracy	±0.1°C
CO <sub>2</sub> control range	0 - 20%
CO <sub>2</sub> control accuracy	±0.1% (IR sensor)
CO <sub>2</sub> 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
Chamber size WxDxH (mm)	530x460x720
Overall size WxDxH (mm)	684x700x960
Standard shelves qty	3 pcs
Sterilization	UV sterilization + HEPA sterilization
Alt Name	Water jacket CO <sub>2</sub> incubator

## FEATURES

Intelligent touch screen controller:

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#### CO<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub> concentration data.

If open the door for 30s and close the door, within 3 min the CO<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub> gas quality is an important factor to judge cell culture. In the CO<sub>2</sub> 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

CO<sub>2</sub> access port equips micro biological HEPA filter, it can filters diameter  $\geq 0.3\mu\text{m}$  Particles like CO<sub>2</sub> 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.

CO<sub>2</sub> 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
- CO<sub>2</sub> 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



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