



## Incubators

BIF Series - Forced-air Convection

BIT Series - Natural Convection

BIC Series - Cooling

## BEING Introduction

*BEING is an economically priced, high-end, high-performance laboratory equipment brand. We are committed to providing users with intelligent, intuitive, and professional laboratory equipment that modern laboratories require.*

*Besides the BIF and BIT heating incubators and BIC cooling incubators, BEING offers laboratories a broad portfolio of ovens, shakers, stirrers, water baths, circulators, chillers, and vacuum pumps.*

## BIF / BIT Incubators



### **Our heating incubators are the 'Smart Choice' for culture growth, storage, and testing.**

With 9 different models to choose from, BEING offers one of the largest selections of forced-air and natural convection lab incubators on the market. They are ideal for applications such as culture growth, temperature-dependent incubations, enzymatic reactions, stability assays, biochemical and hematological studies, and reagent storage, among various other applications in food and beverage, pharmaceutical, research laboratories, and many other industries.

All of our incubators are energy efficient, have excellent temperature regulation capabilities, and come with a host of features that provide safe and easy operation — and are economically priced. They're all designed, manufactured, and tested to the DIN 12880-2007 standard, providing a long service life.

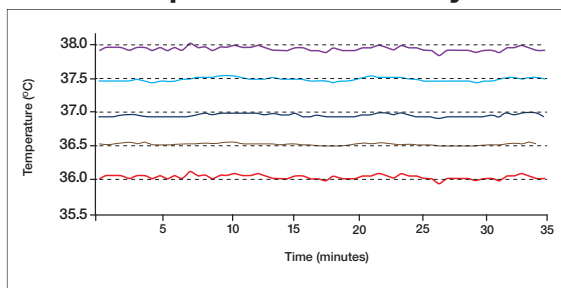
This combination of selection, specifications, features, quality, and value makes BEING incubators the smart choice.



## Precise temperature control

BEING BIF and BIT series incubators provide a precise and steady heating environment that ensures consistent product quality, lowers the chances for rework and helps achieve reliable production results while reducing your laboratory's energy costs by being energy efficient.

### Temperature Uniformity

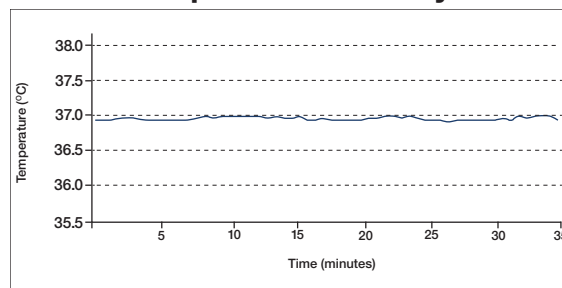


The incubation chamber's temperature uniformity enables all samples to be heated evenly.

BIF and BIT series:  $\leq \pm 0.8^{\circ}\text{C}$

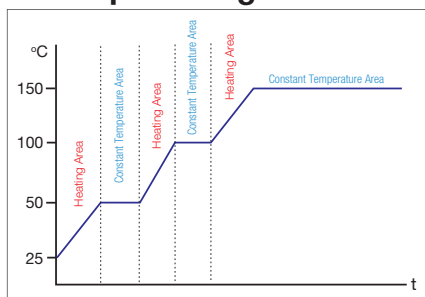
**Note:** The stability and uniformity are measured at steady-state with an empty chamber according to DIN 12880, and at an ambient temperature of  $25^{\circ}\text{C}$ .

### Temperature Stability



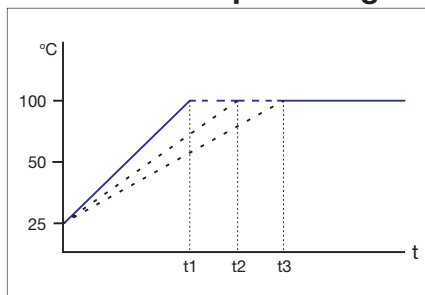
The incubation chamber's temperature stability of  $\pm 0.2^{\circ}\text{C}$  ensures experiment stability.

### Step Heating Control



In program control mode, the controller allows the operator to set up step heating control.

### Linear Ramp Heating

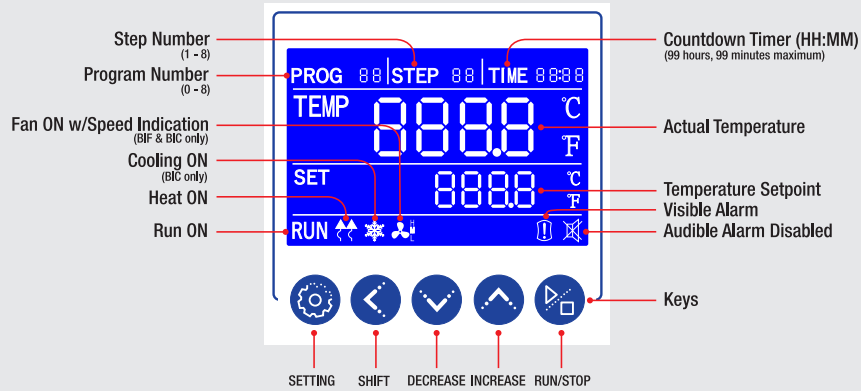


In program control mode, the controller allows the operator to set up linear ramp heating profiles.

Controller & Safety Feature		Forced-air Convection Incubators	Natural Convection Incubators
Series		BIF	BIT
Controller	Automatic power on/off	✓	✓
	PID automatic control	✓	✓
	Programmable functions	✓	✓
	Fixed-value programs	✓	✓
	Multi-step programs	✓	✓
	Controller-controlled ramp	✓	✓
	Linear heating ramp	✓	✓
	Program cycling	✓	✓
	Timed & Untimed	✓	✓
	Fan speed - Adjustable	✓	-
RUN delay	✓	✓	
Ports	Accessory Access	✓ <sup>1</sup>	✓ <sup>1</sup>
	Test hole	✓	✓
Safety	Over-temperature protection	✓	✓
	Temperature limit protection	✓	✓
	Over-current protection	✓	✓
	Power off memory	✓	✓
	Anti-scalding protection	✓	✓
	Audible & visual alarms	✓	✓

<sup>1</sup> A Ø50mm accessory access port only on BIF-55, BIF-120, BIF-200, BIT-55, BIT-120, and BIT-200.

# Professional LCD Controller Features



The BEING L-series professional controller has a 3.1-inch easy-to-read, real-time LCD display to select the various functions with all the parameters — temperature, time, program number, and step — on a single screen, providing quick and easy setting of temperature, time, and other parameters — and convenient operation.



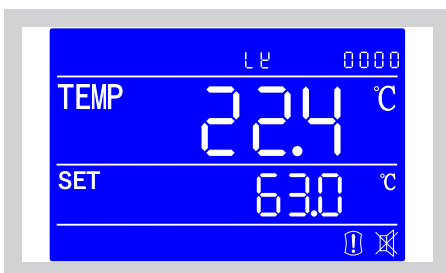
## Easy to use

Simple and intuitive setting of all the operating parameters thanks to easy-to-understand icons and symbols.



## Programmable control at your fingertips

The incubator is designed to be used immediately out of the box with a single (fixed value) basic timed (1 minute to 99 hours and 59 minutes) or untimed program. But, if you need to simplify complicated testing processes and realize automatic control, that can be easily achieved. You can store and run up to 8 multistep programs with 8 steps each. Need to start your experiment at a specific time? The On/RUN delay makes it easy to do. Want to cycle your multistep program numerous times? That can be done up to 99 cycles.



## Password Protected

The controller has 4 settings access levels. Each level is password protected to avoid accidental changes to "sensitive" parameters.

# BIF/BIT Incubator Features



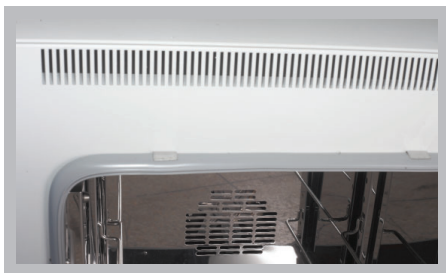
## Glass observation door/window

You can regularly monitor the specimens at a glance without impacting the incubating environment through the observation window on the BIT-16 or the glass door on all other incubator models. This window and door are made of high-strength tempered safety glass.



## Space saving stackability

At the recommendation of our customers, we have designed the **BIF-55**, **BIF-120**, **BIT-55**, and **BIT-120** models to be stackable to save space. Mounting buttons on the incubator top and matching indentations in the feet provide easy alignment of another incubator and ensure the top incubator doesn't move.



## Energy saving design

Comprehensive safety performance design to prevent high energy consumption. A new silicone door seal prevents heat loss and prolongs the heating elements' life. Compared with traditional equipment, BEING incubators are designed and engineered to **minimize heat loss by 20%, and thermal power is reduced by 25%.**



## Temperature test hole

An Ø5mm OD external temperature probe can be inserted into the incubator's chamber to validate temperature settings to the actual chamber temperature.



## Accessory access port

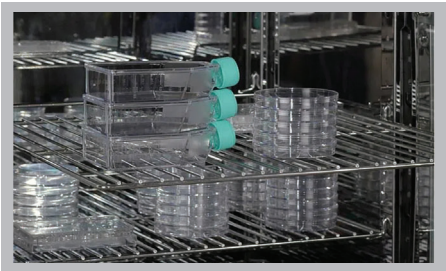
Growing cultures and testing experiments often require additional instrumentation in the incubator's chamber. BEING includes a side-mounted, **Ø50mm port** to run your wires on the **BIF-55**, **BIF-120**, **BIF-200**, **BIT-55**, **BIT-120**, and **BIT-200**.

# BIF/BIT Incubator Features



## Stainless steel inner liner

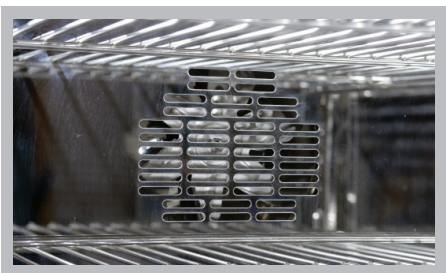
Mirror-polished 304 stainless steel lines the BIF and BIT's chamber to provide excellent corrosion resistance. The large radius covered corners offer easy cleaning, sterilization, and maintenance while providing optimal air circulation.



## Flexible, no tilt shelf design

BEING's adjustable wire rack shelf design improves air circulation and maximizes chamber organizational versatility. As you pull out the chrome-plated, 304 stainless steel shelves, BEING's anti-inclination and shelf locking feature lock them in place when reaching halfway, eliminating any shelf tilting and experiment or sample loss, minimizing accidents, and protecting the operator.

Two shelves are supplied with each model; additional shelving is available if you need more storage.



## Circulating fan (BIF Series)

The forced-air convection fan has a large impeller with a unique duct design to provide good temperature uniformity by moving the air horizontally across the shelves and a fast recovery rate. The low noise emitting, 3-speed (high-100%, medium-75%, low-50%) fan is either controller adjusted based on temperature difference, or the user can select the appropriate speed for their application. The fan power adjustment saves energy, improves overall equipment efficiency (OEE), and **increases motor service life by up to 30%**.



## Exhaust vent

Hot air naturally rises, so BEING locates an exhaust vent near the top of the incubator to promote air circulation and provide chamber temperature uniformity and trouble-free access.

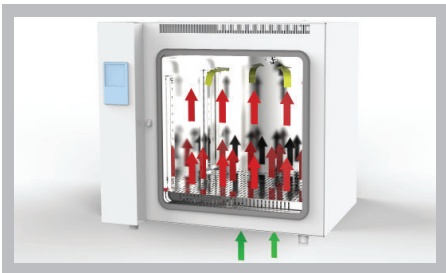
On the **BIT-16**, this exhaust vent opening is easily adjustable to modify incubation time by controlling the amount of airflow through the incubator; enhance the incubating chamber's ventilation efficiency; prevent excessive heat loss, and improve temperature uniformity.

# BIF/BIT Incubator Features



## Chamber air circulation (BIF Series)

Ambient air is drawn in through the incubator's back. Pulled over the heating element and blown to the front of the chamber. Reflects off the door and expelled through the exhaust port.



## Chamber air circulation (BIT Series)

Ambient air enters the chamber through the incubator's bottom. It's heated as it passes over the heating element. The heated air rises and is naturally drawn to and exits the exhaust port in the incubator's back.



## Preventing damage from overheating

All incubators have dual overheating protection to prevent specimen and equipment damage. The controller's over-temperature protection is adjustable. It shuts down the heating element and fires an alarm until the temperature drops below the set point if the incubator exceeds the set temperature and the alarm setting. The independent overheating switch is fixed to a specific temperature and is equipped with a manual reset. If the controller malfunctions, the switch cuts off the unit's power to the heating element until the user presses the reset button.



## Robust overcurrent and ground-fault protection

Laboratories need their electronic equipment to run precisely; otherwise, overheating can damage their experiments and equipment, shock the user, or cause a fire. All BEING BIF and BIT Series incubators are equipped with high-quality circuit breakers to protect against overcurrent, overloads, and short circuits while meeting international electrical standards.

# Forced-air Convection Incubator

Model	BIF-35	BIF-55	BIF-120	BIF-200
Catalog Number	BH15235U	BH15255U	BH152120U	BH152200U
Chamber Volume (ft <sup>3</sup> / L)	1.2 / 33	2.0 / 56	4.5 / 128	8.1 / 230
Temperature Range	Ambient + 9°F - 176°F / Ambient + 5°C - 80°C			
Display Resolution	0.1			
Temperature Uniformity	±1.44°F (@98.6°F) / ±0.8°C (@37°C)			
Temperature Stability	±0.36°F (@98.6°F) / ±0.2°C (@37°C)			
Time to reach 37°C	25 min	30 min		
Shelves (Std. / Max.)	2 / 5	2 / 6	2 / 10	2 / 16
Shelves loading (lb / Kg)	44.1 / 20			
Net Weight (lb / Kg)	105.8 / 48	123.5 / 56	180.8 / 82	262.4 / 119
Timer (hh:mm)	00:01 – 99:59			
Accessory Access Port	-	Ø50mm	Ø50mm	Ø50mm
Test Hole	Ø5mm			
Internal Dimension (W×H×D) (in / mm)	12.6 × 15.4 × 12.6 320 × 390 × 320	15.8 × 16.0 × 16.3 400 × 405 × 415	20.5 × 20.1 × 20.9 520 × 510 × 530	25.6 × 23.6 × 25.6 650 × 600 × 650
External Dimension (W×H×D) (in / mm)	24.0 × 21.7 × 21.5 610 × 550 × 545	27.2 × 22.0 × 25.2 690 × 560 × 640	31.9 × 27.0 × 29.7 810 × 685 × 755	37.0 × 29.7 × 34.5 940 × 755 × 875
Electrical Requirement	120V/60Hz			
Electrical Plug Type	NEMA 5-15			
Power Consumption	300W	350W	600W	700W
Stackable	-	•	•	-
Shelf Part Number*	P19267	P19193	P19194	P19248

\*The shelf kit includes the shelf and two (2) shelf brackets.

**NOTE:** All specifications listed are based on testing done at 25°C.

# Natural Convection Incubator

Model	BIT-16	BIT-35	BIT-55	BIT-120	BIT-200
Catalog Number	BH15116U	BH15135U	BH15155U	BH151200U	BH151200U
Chamber Volume (ft <sup>3</sup> / L)	0.6 / 16	1.3 / 37	2.1 / 60	4.3 / 123	8.1 / 228
Temperature Range	Ambient + 9°F ~ 176°F / Ambient + 5°C - 80°C				
Display Resolution	0.1				
Temperature Uniformity	±1.44°F (@98.6°F) / ±0.8°C (@37°C)				
Temperature Stability	±0.36°F (@98.6°F) / ±0.2°C (@37°C)				
Time to reach 37°C	30 min				
Shelves (Std. / Max.)	2 / 5	2 / 5	2 / 9	2 / 12	2 / 16
Shelves Loading (lb / Kg)	44.1 / 20				
Net Weight (lb / Kg)	50.7 / 23	97.0 / 44	116.8 / 53	174.2 / 79	238.1 / 108
Timer (hh:mm)	00:01 – 99:59				
Accessory Access Port	–	–	Ø50mm	Ø50mm	Ø50mm
Test Hole	Ø5mm				
Internal Dimension (W×H×D) (in / mm)	10.6 × 9.0 × 10.2 270 × 230 × 260	12.6 × 13.4 × 13.0 320 × 340 × 330	15.8 × 14.2 × 15.0 400 × 360 × 380	20.5 × 18.9 × 19.3 520 × 480 × 490	25.6 × 21.3 × 25.6 650 × 540 × 650
External Dimension (W×H×D) (in / mm)	20.0 × 15.0 × 17.3 508 × 380 × 440	24.0 × 20.5 × 22.8 610 × 520 × 580	27.2 × 18.4 × 25.2 690 × 468 × 640	31.9 × 23.2 × 29.7 810 × 588 × 755	37.0 × 25.9 × 35.8 940 × 658 × 910
Electrical Requirement	120V/60Hz				
Electrical Plug Type	NEMA 5-15				
Power Consumption	100W	300W	350W	600W	700W
Stackable	–	–	•	•	–
Shelf Part Number*	P19053	P19263	P19193	P19194	P19248

\*The shelf kit includes the shelf and two (2) shelf brackets.

**NOTE:** All specifications listed are based on testing done at 25°C.

# BIC Cooling Incubators



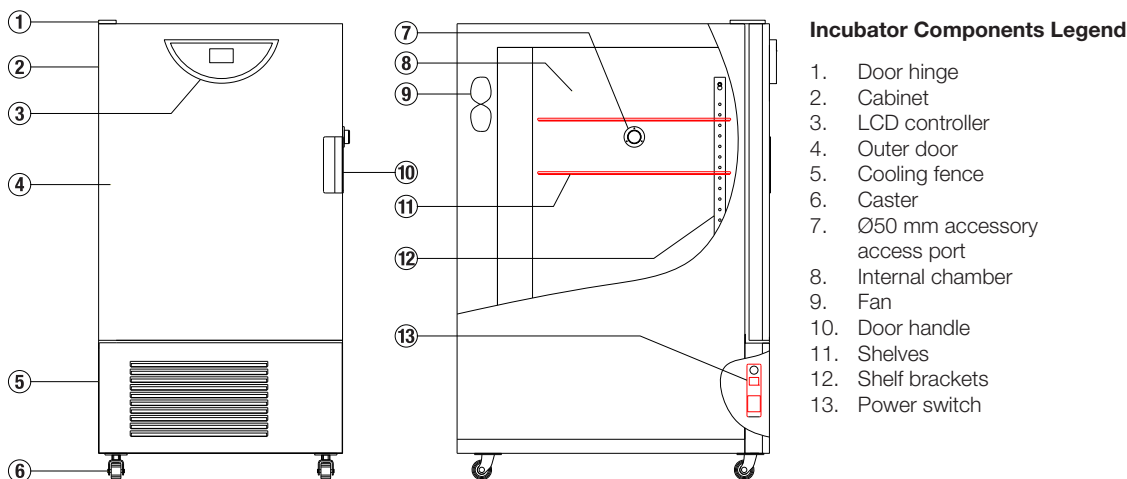
**NOW** with  
**R1234ze**  
ECO-FRIENDLY  
REFRIGERANT

## Our cooling incubators are the 'Smart Choice' for storage, studies, and testing.

BEING's BIC Series laboratory cooling (refrigerated) incubators offer one of the largest temperature ranges, -10°C to 80°C, on the market. They are ideal for applications such as culture, serum and medicine storage, plant and insect, fermentation and enzyme digestion studies, tissue culturing, histochemical procedures, dry and staining procedures, and shelf-life and water pollution testing. They are widely used in pharmaceutical, food, chemical, electronics, cosmetics, microbiology, and other industries.

All of our cooling incubators are energy efficient, have excellent temperature regulation capabilities, and come with a host of features that provide safe and easy operation — and are economically priced. They're all designed, manufactured, and tested to the DIN 12880-2007 standard, providing a long service life.

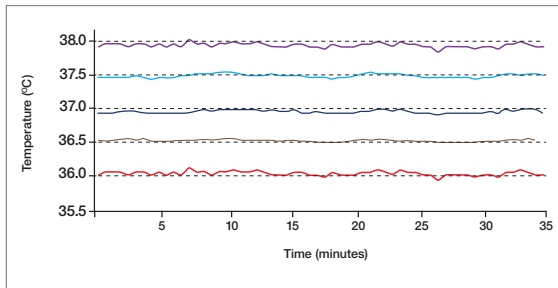
This combination of selection, specifications, features, quality, and value makes BEING cooling incubators the smart choice.



## Precise temperature control

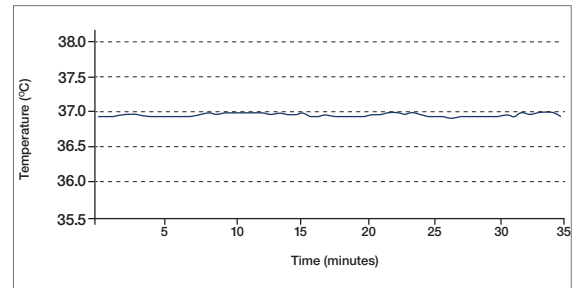
BEING BIC series incubators provide a precise and steady cooling or heating environment that ensures consistent product quality, lowers the chances for rework and helps achieve reliable production results while reducing your laboratory's energy costs by being energy efficient.

### Temperature Uniformity



The incubation chamber's temperature uniformly cools or heats samples to within  $\pm 1.0^{\circ}\text{C}$ .

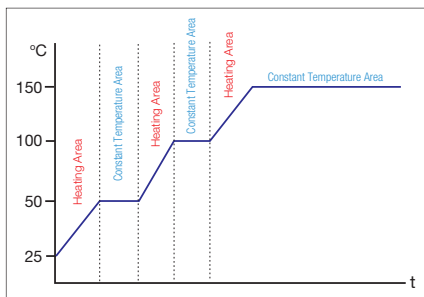
### Temperature Stability



With a  $<\pm 0.3^{\circ}\text{C}$  (high temp.) and  $<\pm 0.5^{\circ}\text{C}$  (low temp.) temperature stability BEING ensures experiment stability.

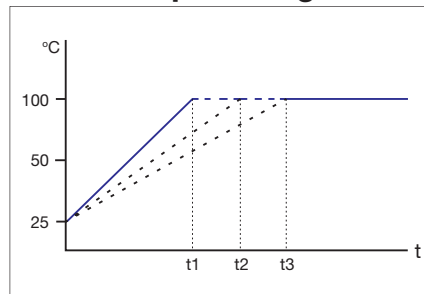
**Note:** The stability and uniformity are measured at steady-state with an empty chamber according to DIN 12880, and at an ambient temperature of  $25^{\circ}\text{C}$ .

### Step Cooling/ Heating Control



In program control mode, the controller allows the operator to set up step cooling and heating control.

### Linear Ramp Heating/Cooling



In program control mode, the controller allows the operator to set up linear ramp heating and cooling profiles.

Controller & Safety Feature		Cooling Convection Incubators
<b>Series</b>		BIC
<b>Controller</b>	Automatic over on/off	✓
	PID automatic control	✓
	Programmable functions	✓
	Fixed-value programs	✓
	Multi-step programs	✓
	Controller-controlled ramp	✓
	Linear heating/cooling ramp	✓
	Program cycling	✓
	Timed & Untimed	✓
	Fan speed - Adjustable	✓
RUN delay	✓	
<b>Ports</b>	Accessory Access	✓ <sup>1</sup>
<b>Safety</b>	Over-temperature protection	✓
	Temperature limit protection	✓
	Over-current protection	✓
	Power off memory	✓
	Anti-scalding protection	✓
	Audible & visual alarms	✓

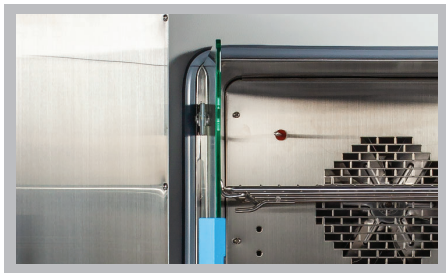
<sup>1</sup>Ø50mm port.

# BIC Cooling Incubator Features



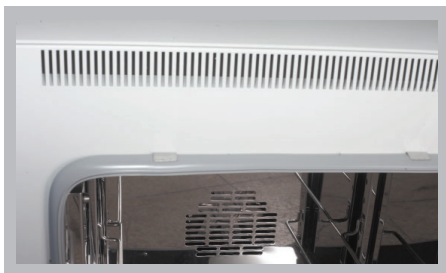
## Professional LCD Controller

The intelligent controller has a bright, easy-to-understand LCD that shows the incubator's parameters on a single screen, and the pushbuttons allow quick temperature and time settings. It simplifies complicated testing procedures by creating up to 8 multistep programs with 8 steps each. Time can be programmed from 1 minute to 99 hours 59 minutes.



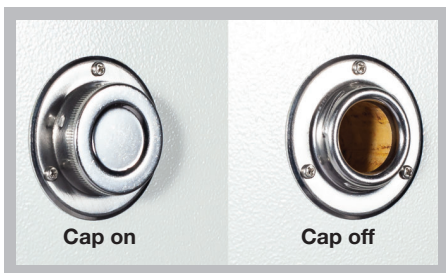
## Glass observation door

You and your personnel can regularly monitor the specimens at a glance without impacting the incubating environment through the glass door made of high-strength tempered safety glass. The insulated outer door, in combination with the glass door, provides excellent heat retention.



## Energy saving design

Comprehensive safety performance design to prevent high energy consumption. A new silicone door seal prevents heat loss and prolongs the heating elements' life. Compared with traditional equipment, BEING incubators are designed and engineered to **minimize heat loss by 20%, and thermal power is reduced by 25%**.



## Accessory access port

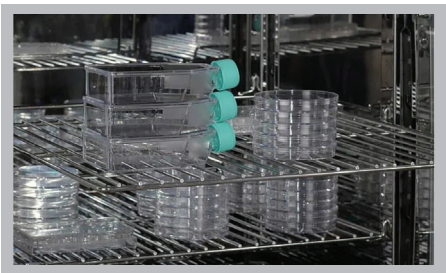
Growing cultures and testing experiments often require additional instrumentation in the incubator's chamber. BEING includes a side-mounted, **Ø50mm port** to run your wires.

# BIC Cooling Incubator Features



## Stainless steel inner liner

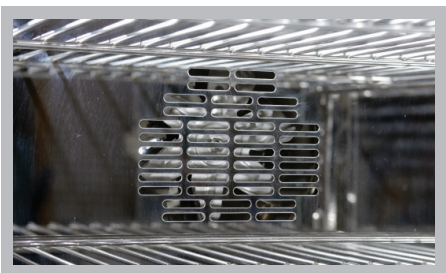
Mirror-polished 304 stainless steel lines the BIC's chamber to provide excellent corrosion resistance. The large radius covered corners offer easy cleaning, sterilization, and maintenance while providing optimal air circulation.



## Flexible, no tilt shelf design

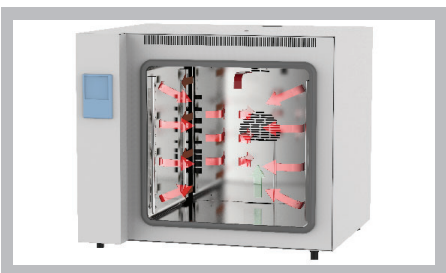
BEING's adjustable wire rack shelf design improves air circulation and maximizes chamber organizational versatility. As you pull out the chrome-plated, 304 stainless steel shelves, BEING's anti-inclination and shelf locking feature lock them in place when reaching halfway, eliminating any shelf tilting and experiment or sample loss, minimizing accidents, and protecting the operator.

Two or three shelves are supplied depending on the model; additional shelving is available if you need more storage.



## Circulating fan

The forced-air convection fan has a large impeller with a unique duct design to provide good temperature uniformity by moving the air horizontally across the shelves and a fast recovery rate. The low noise emitting, 3-speed (high-100%, medium-75%, low-50%) fan is either controller adjusted based on temperature difference, or the user can select the appropriate speed for their application. The fan power adjustment saves energy, improves overall equipment efficiency (OEE), and **increases motor service life by up to 30%**.



## Chamber air circulation

Ambient air is drawn in through the incubator's back. Pulled over the heating element and blown to the front of the chamber. Reflects off the door and expelled through the exhaust port.

## BIC Cooling Incubator Features



### Preventing damage from overheating

All incubators have dual overheating protection to prevent specimen and equipment damage. The controller's over-temperature protection is adjustable. It shuts down the heating element and fires an alarm until the temperature drops below the set point if the incubator exceeds the set temperature and the alarm setting. The independent overheating switch is adjustable.



### Robust overcurrent and ground-fault protection

Laboratories need their electronic equipment to run precisely; otherwise, overheating can damage their experiments and equipment, shock the user, or cause a fire. All BEING BIC Series incubators are equipped with high-quality circuit breakers to protect against overcurrent, overloads, and short circuits while meeting international electrical standards.



### Independent cooling and heating system

BEING cooling incubators are designed with independent cooling and heating systems managed by the controller to provide fast temperature stability and excellent accuracy. The cooling system utilizes a high-efficient refrigeration compressor which **shortens the cooling time by 40%** compared with traditional cryogenic equipment saving energy. It uses eco-friendly refrigerant and has a low noise emission. The heating system is identical to our BIF heating incubators.

# Cooling Incubator

Model	BIC-60	BIC-120	BIC-250	
Catalog Number	BLC15060U	BLC150120U	BLC150250U	
Chamber Volume (ft <sup>3</sup> / L)	2.4 / 68	4.2 / 120	8.7 / 247	
Temperature Range	14°F - 176°F / -10°C - 80°C			
Display Resolution	0.1			
Temperature Uniformity	±1.8°F (@77°F) / ±1.0°C (@25°C)			
Temperature Stability	High: ±0.54°F / ±0.3°C   Low: ±0.9°F / ±0.5°C			
Shelves (Std. / Max.)	2 / 10	3 / 14	3 / 16	
Shelves loading (lb / Kg)	44.1 / 20			
Net Weight (lb / Kg)	187.4 / 85	220.5 / 100	264.6 / 120	
Timer (hh:mm)	00:01 – 99:59			
Accessory Access Port	Ø50mm			
Internal Dimension (WxHxD) (in / mm)	15.8 × 17.7 × 15.0 400 × 450 × 380	19.7 × 23.6 × 15.8 500 × 600 × 400	21.7 × 29.5 × 23.6 550 × 750 × 600	
External Dimension (WxHxD) (in / mm)	21.5 × 39.4 × 27.2 545 × 1000 × 690	26.0 × 45.3 × 27.2 645 × 1150 × 690	27.4 × 51.2 × 35.17 695 × 1300 × 890	
Refrigerant	Compressor	1/3 Hp Reciprocating	1/2 Hp Reciprocating	
	Type	R1234ze		
	Charge (g)	260	300	400
	GWP	≤1		
Electrical Requirement	120V/60Hz			
Electrical Plug Type	NEMA 5-15			
Power Consumption	1300W	1500W	1700W	
Shelf Part Number*	P19277	P19278	P19279	

\*The shelf kit includes the shelf and two (2) shelf brackets.

**NOTE:** All specifications listed are based on testing done at 25°C.

THE  
**DRAKE**  
BUSINESS GROUP  
CORPORATION

(02) 8463 4943 | (02) 8463 5120  
(+63) 939 911 9277



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1052 Benigno Aquino Avenue, Sitio 2  
Bahay Pare, Candaba, Pampanga  
Philippines, 2013

176 Benigno Aquino Avenue, Sitio 2  
Bahay Pare, Candaba, Pampanga  
Philippines, 2013

information@drakephilippines.com

