



# **Drying Ovens**

BOF Series - Forced-air Convection BON Series - Natural Convection

BEING Scientific Inc.



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 BOF and BON drying ovens, BEING offers laboratories a broad portfolio of incubators, vacuum ovens, shakers, stirrers, evaporators, water baths, chillers, and vacuum pumps.

# Our next generation drying ovens are the 'Smart Choice' for laboratory drying ovens.

With 12 different models to choose from, BEING offers one of the largest selections of lab ovens on the market. They are ideal for applications such as aging tests, baking and curing, dehydrating, dry sterilization, glassware drying, moisture and stability testprocessing electronics, and regenerating desiccants and catalysts in chemistry, clinical, forensic, electronics, material processing, pharmaceutical, and research laboratories.

All of our ovens 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 drying ovens the smart choice.



### Precise temperature control

BEING BOF and BON series drying ovens 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.



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

BOF series:  ${\leq}{\pm}1.5^{\circ}C$  to  ${\pm}3.5^{\circ}C$  depending on oven size. BON series:  ${\leq}{\pm}3.0^{\circ}C$ 

#### **Temperature Stability**



The drying chamber's temperature stability of  $\pm 0.5^{\circ}$ C ensures experiment stability.

#### Note: The stability and uniformity are measured at steady-state.



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

Controller & Safety Feature		Forced-air Convection Oven	Natural Convection Oven	
Series		BOF	BON	
Controller	Automatic Power on/off	1	1	
	PID automatic control	$\checkmark$	$\checkmark$	
	Programmable function	$\checkmark$	$\checkmark$	
	Data collection	USB	USB	
	Test hole	1	$\checkmark$	
Safety	Over temperature protection	$\checkmark$	$\checkmark$	
	Temperature limit production	$\checkmark$	$\checkmark$	
	Over current protection	$\checkmark$	1	
	Power off memory	$\checkmark$	$\checkmark$	
	Anti-scalding protection	$\checkmark$	$\checkmark$	

## Intelligent Controller Features



The BEING intelligent controller has a 4.3-inch color, easy-to-read, real-time touchscreen display to select the various functions with all the parameters — temperature, fan speed, 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-tounderstand icons and symbols. The capacitive display ensures touch sensitivity and precision — even when wearing gloves.

ESC	ESC SET PROG		5		ОК			
Step	1	2	3	4	5	6	7	8
Ĵ	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
(L) min	99:59	99:59	99:59	99:59	99:59	99:59	99:59	99:59
20	100%	100%	75%	100%	100%	100%	50%	75%

#### Programmable control at your fingertips

Simplify complicated testing processes and realize automatic control and operation by creating up to 7 multistep programs with 9 steps each. Parameters such as multi-stage temperature, circulating fan speed (BOF series), time from 1 minute to 99 hours and 59 minutes, and heating rate can be set and programmed at the same time. Single (fixed value) basic program available for use as needed.



#### **Password Protected**

The controller has 3 settings access levels: User, Service, and Admin. The user settings level allows access to all the operational parameters (temperature, heating rate, fan speed, and time) for running an experiment. The service and admin level menus are password protected to avoid accidental changes to "sensitive" parameters.



### **Oven Features**



#### Space saving stackability

At the recommendation of our customers, we have designed the **BOF-50T**, **BOF-120T**, **BON-50T**, and **BON-115T** models to be stackable to save space. Indentations stamped into the unit's sheet metal provide easy alignment of another oven and ensure the top oven doesn't move. The feet are height-adjustable to level the units, front to back and side to side.



#### **USB** data collection

Insert a USB flash drive or cable into the oven's controller before running your experiment. Select your fixed value or multistep program parameters. Press run and the controller will automatically store the work cycle parameter data on your device at 1-minute intervals.



#### 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 ovens are designed and engineered to **minimize heat loss by 20%, and thermal power is reduced by 25%.** 



#### Adjustable exhaust port (BOF Series)

The exhaust port opening is easily adjustable to meet the situation, enhance the drying chamber's ventilation efficiency, prevent excessive heat loss, and improve temperature uniformity.



### **Oven Features**



#### Temperature test hole

External temperature probe can be inserted into the drying chamber to validate temperature settings to actual chamber temperature.



#### **Circulating fan (BOF Series)**

The forced convection fan has a large impeller design to provide good temperature uniformity. The fan power is multi-stage (100%, 75%, 50%) adjustable to give the correct airflow for your application. The fan power adjustment improves the overall equipment efficiency (OEE) and **increases motor service life by up to 30%.** 



#### Stainless steel inner liner

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



#### Professional anti-skid and anti-spill shelf design

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.



Model	BOF-30T	BOF-50T	BOF-120T	BOF-200T	BOF-400T	
Chamber Volume (ft <sup>3</sup> / L)	1.05 / 30	1.8 / 51	4.2 / 121	7.5 / 211	14.1 / 400	
Temperature Range	Ambient + 18°F ~572°F / Ambient + 10°C ~300°C					
Display Resolution	0.1					
Uniformity (@100°C)	±1.5	±2.5	±3.0	±3.0	±3.5	
Temperature stability	±0.5 (@100°C)					
Time to reach 100°C	30 min		40 min			
Shelves (Std. / Max.)	2 / 5	2 / 9	3/12	3 / 16	3 / 16	
Shelves loading (lb / Kg)	44.1 / 20	44.1 / 20	44.1 / 20	44.1 / 20	44.1 / 20	
Net Weight (lb / Kg)	94.8 / 43	112.4 / 51	183.0 / <mark>83</mark>	246.9 / 112	463.0 / 210	
Timer (hh:mm)	00:01 – 99:59	00:01 – 99:59	00:01 – 99:59	00:01 - 99:59	00:01 – 99:59	
Internal Dimension (W×H×D) (in/mm)	12.6 × 12.6 × 11.6 320 × 320 × 295	15.8 × 16.3 × 12.2 400 × 415 × 310	20.5 × 20.9 × 17.3 520 × 530 × 440	25.6 × 25.6 × 19.6 650 × 650 × 500	39.3 × 31.4 × 19.6 1000 × 800 × 500	
External Dimension (W×H×D) (in/mm)	20.1 × 21.3 × 21.7 510 × 540 × 550	27.2 × 25.2 × 22.1 690 × 640 × 560	31.9 × 29.7 × 27.0 810 × 755 × 685	37.0 × 34.4 × 29.5 940 × 875 × 750	50.6 × 41.7 × 29.6 1285 × 1060 × 750	
Electrical Requirement	110V, 1300W	110V, 1800W	110V, 2050W	220V, 2500W	220V, 3200W	
Catalog number	BO212030U	BO212050U	BO212120U	BO212200C	BO212400C	
Stackable	-	•	•	-	-	



# Natural Convection Drying Oven

Model	BON-30T	BON-50T	BON-115T	BON-200T		
Chamber Volume (ft <sup>3</sup> / L)	1.1 / 30	1.8 / 50	4.1 / 115	7.5 / 211		
Temperature Range	Ambient + 18°F ~572°F / Ambient + 10°C ~300°C					
Display Resolution	0.1					
Uniformity (@100°C)	±3.0					
Temperature stability	±0.5 (@100°C)					
Time to reach 100°C	40 min					
Shelves (Std. / Max.)	2 / 5	2 / 6	2 / 10	2 / 16		
Shelves loading (lb / Kg)	44.1 / 20	44.1 / 20	44.1 / 20	44.1 / 20		
Net Weight (lb / Kg)	94.8 / 43	99.2 / 45	163.1 / 74	227.1 / 103		
Timer (hh:mm)	00:01 – 99:59	00:01 - 99:59	00:01 – 99:59	00:01 – 99:59		
Internal Dimension (W×H×D) (in/mm)	12.6 × 12.6 × 11.8 320 × 320 × 300	15.8 × 14.9 × 13.0 400 × 380 × 330 mm	20.5 × 19.4 × 17.7 520 × 495 × 450	25.6 × 25.6 × 19.6 650 × 650 × 500		
External Dimension (W×H×D) (in/mm)	24.0 × 22.8 × 20.5 610 × 580 × 520	27.2 × 25.2 × 18.4 690 × 640 × 468	31.9 × 29.7 × 23.2 810 × 755 × 590	37.0 × 35.8 × 25.9 940 × 910 × 658		
Electrical Requirement	110V, 1200W	110V, 1600W	110V, 1800W	220V, 2250W		
Catalog Number	BO211030U	BO211050U	BO211120U	BO211200C		
Stackable	-	•	•	-		

### BEING's portfolio of laboratory equipment includes.

#### Incubators

BIF Series - Mechanical Convection Incubator BIT Series - Natural Convection Incubator BIC Series - Cooling Incubator BIO Series - CO<sub>2</sub> Incubator

#### **Ovens**

BOF Series - Forced-air Drying Oven BON Series - Natural Convection Drying Oven BOV Series - Vacuum Oven

#### **Shakers**

BS Series - Orbital Shaker BIS Series - Incubated Shaker

#### **Stirrers**

BMS Series - Square Plate Heated Magnetic Stirrer

#### **Evaporators**

BRE Series - Rotary Evaporator

#### Water Bath

BWB Series - General Purpose Water Bath BPC Series - Heat/Cooling Circulating Bath BRC Series - Recirculating Chiller

#### **Pumps**

V Series - Diaphragm Pumps

### Learn more at **www.beinglab-usa.com** The 'Smart Choice' for laboratory equipment.

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