



Model: IFA-110-8

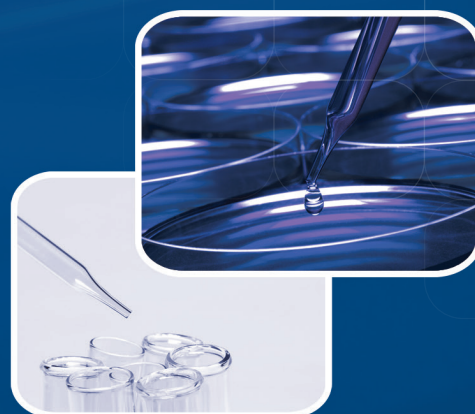


Model: OFA-110-8

# Isotherm®

## Laboratory Thermostatic Products

*Reliable Performance for Universal Applications*



# LABORATORY THERMOSTATIC PRODUCTS OVERVIEW

## Forced Convection

Convection is a method of heat energy transfer that involves the movement of a fluid (gas or liquid). Fluid in contact with the heat source expands and tends to rise within the bulk of the fluid. Cooler fluid sinks to take its place, setting up a convection current. However, in a forced convection device, the fluid motion is generated by an external source (like a pump, fan, suction device, etc.).



### Forced Convection Laboratory Oven

Laboratory oven is used for high-volume thermal convection applications. This provides uniform temperature throughout the chamber necessary for annealing, drying, sterilizing, and other industrial lab functions. Typical sizes are from one cubic foot (28 liters) to 32 cubic feet (906 liters) with temperatures that can reach 300°C (572°F).



### Forced Convection Laboratory Incubator

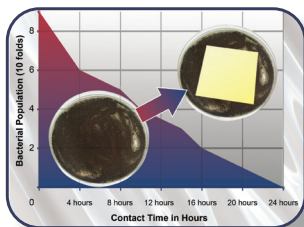
Laboratory incubators are devices that provide a temperature-controlled environment to support the growth of microbiological cultures. Typical forced convection incubators are insulated boxes with an adjustable heater, going up to 60°C to 65°C (140°F to 149°F), though some can go slightly higher (generally to no more than 100°C).

# Isotherm<sup>®</sup>

## Forced Convection Laboratory Incubators

**S1** Esco Isotherm<sup>®</sup> forced convection laboratory incubator provides a temperature-controlled environment via forced convection design. It has an intuitive interface, microprocessor PID controls with programming options, a 4-zone heated air jacket, precisely tuned and tested ventilation, an insulation package, and ergonomic features to provide quality and convenience.

**S2**  
**S5**



### Quality Esco Construction

- Electrogalvanized steel exteriors
- Isocide<sup>™</sup> coated external surfaces to eliminate 99.9% of surface bacteria within 24 hours of exposure



### Superior Insulation

- Improves chamber stability while reducing external surface temperatures
- Reduces heat load output to the laboratory and operating power consumption, and lowers operating costs

### SmartSense<sup>™</sup> Microprocessor PID Control Technology

- Connected to an instrument-grade precision platinum temperature probe
- Prevents overshoot, ensures fast ramp time and stable temperature once set point is achieved
- Twin temperature display for easy monitoring ("Actual" and "Set Point" displays)
- Diagnostic LEDs simplify service
- Air flow adjuster via slider for exchange rate of air
- Comes with a timer function (0000 - 9999 minutes) and up to 10 user-configurable program operations

**S5**

**S6**

**S3**



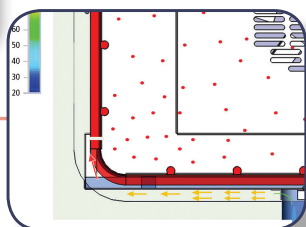
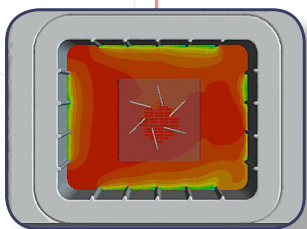
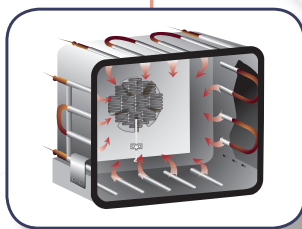
Isotherm<sup>®</sup> Forced Convection Laboratory Incubator, Model IFA-110-.

### Glass Door

- For observing samples inside the chamber during operation

### Pre-Heat Chamber Technology

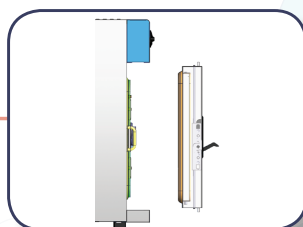
- Guarantees maximum thermal performance
- 4-zone heated air jacket ensures stable heating and maximum temperature uniformity in the chamber
- Standard temperature range of up to 100°C for maximum application stability
- 2-point door seal and eccentric hinge ensures maximum gasket compression for stable chamber temperature



### Ventiflow<sup>™</sup> Ventilation System

- Forced convection design produces faster temperature response rates, improves uniformity and reduces fluctuation
- Permanently lubricated and maintenance-free fan for uniform air circulation
- Low energy consumption and low noise level
- Adjustable fan speed and air exchange rates
- Fresh air entry from the base of the chamber, combined with the rounded corners of the chamber interior and air exhaust at the rear, creates uniform air circulation ensuring maximum temperature uniformity

**S3**



## Guide to Models, Forced Convection Laboratory Incubators

IFA - -

Volume	Code	Electrical Rating	Code
54 L	54	220-240 VAC, 50/60 Hz, 1Ø	8
110 L	110	110-120 VAC, 50/60 Hz, 1Ø	9

## General Specifications, Forced Convection Laboratory Incubators

Model	220-240 VAC, 50/60 Hz, 1ø		IFA-54-8 2100002	IFA-110-8 2100003
	110-120 VAC, 50/60 Hz, 1ø		IFA-54-9 2100018	IFA-110-9 2100020
Volume			54 L (1.9 cu. ft)	110 L (3.9 cu. ft)
Temperature Range			Ambient +7.5°C to 100°C	
Temperature Variation	37°C		± 0.3°C	± 0.3°C
	50°C		± 0.3°C	± 0.5°C
Temperature Fluctuation	37°C		± 0.3°C	± 0.3°C
	50°C		± 0.3°C	± 0.3°C
Heating Up Time*	37°C		23 min	30 min
	50°C		35 min	52 min
Recovery Time after 30 sec door open*	37°C		1.5 min	3 min
	50°C		3 min	5.5 min
Noise Level			48 dBA	49 dBA
Incubator Construction	Main Body		Electrogalvanized steel with white oven-baked epoxy-polyester Isocide™ antimicrobial powder-coated finish	
	Chamber		Stainless steel, grade 304	
Number of shelves	Standard		2	2
	Maximum		5	6
Maximum Load per Shelf			15 Kg (33 lbs)	30 Kg (66 lbs)
External Dimensions (W x D x H)			550 x 527 x 695 mm (21.7" x 20.7" x 27.4")	710 x 587 x 785 mm 28" x 23.1" x 30.9"
Internal Dimensions (W x D x H)			400 x 340 x 400 mm (15.7" x 13.4" x 15.7")	560 x 400 x 490 mm 22" x 15.7" x 19.3"
Electrical	220-240 VAC, 50/60 Hz, 1ø	Current Consumption	8A	4.8A
		Power Consumption	880W	1080W
	110-120 VAC, 50/60 Hz, 1ø	Current Consumption	8A	9.6A
		Power Consumption	880W	1080W
Net Weight			55 Kg (121 lbs)	79 Kg (174 lbs)
Shipping Weight			69 Kg (152 lbs)	98 Kg (216 lbs)
Shipping Dimensions (W x D x H)			630 x 620 x 920 mm (24.8" x 24.4" x 36.2")	780 x 680 x 1020 mm (30.7" x 26.8" x 40.2")
Shipping Volume			0.49 m³ (17.3 cu. ft)	0.61 m³ (21.5 cu. ft)

\*Up to 98% of the set value. For the set point ≥100°C, if the temperature reading is already 2°C below the set point, it will take longer time to reach set point, due to prevent overshoot.

### Note:

- All technical specifications are specified for units with standard equipment at an ambient temperature of 25°C and a voltage fluctuation of ±10%.
- The temperature data are determined in accordance to DIN 12880 standards as per factory type test condition.
- Stainless steel exterior option is available for all sizes.