

INVICTUS NEXT-GEN™ Drosophila Incubators

Reliable Cooling Redundancy

Each INVICTUS NEXT-GEN™ chamber includes multiple, independent thermoelectric cooling units. The 7-year warranty on cooling components and the ability of our chambers to maintain temperature even if the chamber suffers multiple failures is unmatched by any other refrigeration-based chamber.

Quiet Operation

The INVICTUS NEXT-GEN™ chambers utilize quiet and highly efficient DC fans. Locating these chambers in laboratory workspaces is a viable option.

Simple Serviceability

Due to the omission of all refrigeration equipment on these models, refrigeration technicians are not required during chamber servicing. Refrigerated insect rearing chambers are not only costly to service but can require days to service properly. Nearly every component of thermoelectric-based chambers can be serviced within minutes with basic tools. For instance, the ultrasonic humidifier is capable of being removed and reinstalled in less than 5 minutes and operates on non-hazardous 24 volts.

Superior Control and Uniformity

The optional ultrasonic humidification system on the 59-808TLH provides excellent humidity control and avoids hot spots seen during chamber mapping of steam boiler equipped chambers. Thermoelectric cooling and automatic switching system from cooling to heating control provide consistent results throughout the available temperature range. Standard control at the sensor in these chambers is $\pm 0.2^{\circ}\text{C}$ and $\pm 0.3\% \text{RH}$. Temperature and humidity control assumes standard operation in a controlled ambient condition of $22.2^{\circ}\text{C} \pm 4.5^{\circ}\text{C}$ and a dewpoint at or below 11.1°C ($22.2^{\circ}\text{C} / 50\% \text{RH}$).

Greatly Reduced Direct and Indirect Energy Loads

The INVICTUS NEXT-GEN™ chambers utilize less energy than comparable insect rearing chambers and introduce less impact upon building cooling systems. This efficiency “dual benefit” allows our chambers to be in spaces unsuitable for other chambers. Electrical energy savings by the INVICTUS NEXT-GEN™ chambers vs. steam boiler equipped chambers can easily amount to hundreds or even thousands of dollars saved per year.

Advanced Touchscreen Controllers

Standard controllers for the INVICTUS NEXT-GEN™ incubators are the IDEC HG1G touchscreen controllers ideal for insect rearing chambers. This controller is pre-programmed with a Mite Cycle Decontamination Mode exclusive to INVICTUS NEXT-GEN™ incubators. Standard functions include a built-in alarm program with text and email notifications, autotuning, PID control, calibration capability, offset capability, etc.

Services and Warranties

The standard warranty includes 7 years on the thermoelectric cooling module, 2 years all parts, and 1 year all parts and labor.

59-807T, 59-807TL, 59-807TLH Insect Rearing Chamber Specifications (ambient 22.2°C)

Performance	Standard
Temperature Range	16°C to 50°C
Ambient Temperature to Achieve Desired Temperature	22.2°C ± 4.5°C
Temperature Control	± 0.2°C
Temperature Uniformity	± 0.7°C
Control Resolution	0.1°C
Temperature Sensor	NIST Traceable Platinum RTD
Humidity Range	59-807TLH: Ambient to 90% @ 40°C Dewpoint
Humidity Control	59-807TLH: ± 0.3%
Humidity Uniformity	59-807TLH: ± 2%
Control Resolution	59-807TLH: ± 0.1%
Humidity Sensor	59-807TLH: NIST Traceable Rotronic HC2A-S
Control System	Standard
Controller	IDEC H1G1 Touchscreen Controllers
Control Readout	Actual and Set-Point Values, Trending, Duty Cycle
Alarm	Text, Email, Web Server, Remote Access
Alarm Type	Deviation in 0.1°C or 0.1% RH with Delay
Remote Monitoring	Dry Alarm Contact, RS 485 & Analog Output
Password Protection	Alpha Numeric
Audit Trail	Available
Uninterrupted Power Supply (Monitoring)	Available
Construction	Standard
Exterior	Glass Door on 59-807T Models. 18 gauge powder-coated galvanized steel door (59-807TL, 59-807TLH), front, and sides.
Interior	20 gauge 304 grade stainless steel liner, top, bottom, back and sides
Shelving	9 included PVC Coated Shelves.
Casters	2.75". Total Weight Capacity is 300 lbs per Caster (not including the weight of the chamber)
Capacity & Dimensions	US Standard
Interior Capacity	32 ft ³
External Dimensions	34"W x 35" D x 80.5" H
Internal Dimensions	29.5" W x 29.75" D x 58.25" H
Shelf Dimensions	28.75" W x 26" D
Crated Weight	745 lbs
Electrical	US Standard
Voltage (dedicated circuit required)	115 / 60 / 1
RLA	8
Cord Length	9 ft

59-807TL Technical Drawings

