

DROSOPHILA CHAMBERS

Overview

These specialized environmental chambers are engineered specifically for the study of *Drosophila melanogaster* and other small insects. Designed to maintain precise temperature and lighting conditions, they provide a stable environment for rearing, behavioral studies, and genetic research. Each unit is built with materials resistant to the corrosive effects of insect waste and high-humidity environments typical of entomology labs.

Environmental Control Systems

- **Temperature Range:** 5°C to 50°C. Optimized for standard rearing (typically 18°C–25°C) as well as heat-stress and cold-tolerance protocols.
- **Uniformity:** Forced-air circulation ensures consistent horizontal airflow across all shelf levels, eliminating hot spots and maintaining stable conditions throughout the chamber.
- **Safety Monitoring:** Features an independent high and low temperature fail-safe alarm system with audible and visual alerts to protect sensitive research populations.

Specialized Lighting & Diurnal Control

- **Circadian Programming:** Integrated clock-controlled lighting systems allow researchers to simulate precise day/night cycles.
- **Insect-Specific Spectrum:** Standard units include cool white fluorescent or LED lighting. Optional narrow-spectrum lighting (such as amber or "red light" for behavioral observation) is available.
- **Safety Interlocks:** Opaque solid doors prevent external light contamination during dark cycles, maintaining the integrity of photoperiod studies.

Technical Access & Utility

- **Internal Power:** Protected duplex outlet located inside the chamber for powering ancillary equipment such as mixers or shakers.
- **Optional Access Ports:** 1-inch minimum diameter port(s) with a silicone plug allows for the routing of external sensors, probes, or gas lines without compromising the chamber's seal.



Durable Construction for Entomology

- **Corrosion Resistance:** Specially coated evaporator coils designed to withstand the acidic environment created by large insect populations and fruit fly media.
- **Easy Sanitation:** Removable shelving and smooth interior surfaces allow for thorough decontamination between experiments.
- **Mobility:** Heavy-duty, lockable casters are standard on all floor models for easy placement and facility cleaning.

Custom Configuration Options

As these chambers are built to support specific research goals, several upgrades are available:

- **Humidity Control:** Ultrasonic humidification with precise moisture regulation.
- **Dimmable Lighting:** Digital dimming controls to modify lighting intensity.
- **Microprocessor Upgrades:** Multi-step programmable controllers for complex temperature and lighting ramps.

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Feature	Essential Control (EC)	Programmed Lighting (PL)
Primary Focus	Manual climate monitoring	Automated light cycles
Door Style	Glass (allows room light)	Solid/Opaque (blocks light)
Internal Lighting	Manual on/off switch	Programmable digital timer
Humidity Tool	RH Meter (Observation only)	RH Meter (Observation only)
Best For	General temp-stable storage	Light-sensitive experiments
Availability	Upright models only	All Models

REFRIGERATED MODELS

SKU	Available With:	Capacity (ft ³ /liters)	Exterior Dim (W x D x H in)	Interior Dim (W x D x H in)	# Shelves and Size	Electrical	HP	Crated Weight (lbs/kg)
LPD-6-HG-PL2	PL	6 / 170	31 x 30 x 32.5	23 x 17 x 24	2 (23" x 16")	115/60/1, 15 amps	1/5	210 / 95
LPD-10-HG-EC1	EC	10 / 285	26 x 22 x 60	22 x 19 x 42	3 (21" x 17")	115/60/1, 15 amps	1/5	275 / 125
LPD-10-HG-PL2	PL	10 / 285	26 x 22 x 60	22 x 19 x 42	3 (21" x 17")	115/60/1, 15 amps	1/5	275 / 125
LPD-24-HG-EC1	EC	24 / 680	28 x 31 x 78.5	24 x 29 x 57.5	4 (24" x 24")	115/60/1, 15 amps	1/3	425 / 195
LPD-24-HG-PL2	PL	24 / 680	28 x 31 x 78.5	24 x 29 x 57.5	4 (24" x 24")	115/60/1, 15 amps	1/3	425 / 195
LPD-27-HG-EC1	EC	27 / 765	33 x 29 x 78.5	29 x 27 x 57.5	4 (28" x 24")	115/60/1, 15 amps	1/3	450 / 205
LPD-27-HG-PL2	PL	27 / 765	33 x 29 x 78.5	29 x 27 x 57.5	4 (28" x 24")	115/60/1, 15 amps	1/3	450 / 205
LPD-43-HG-EC1	EC	43 / 1220	52 x 31 x 78.5	48 x 26 x 57.5	8 (24" x 24")	115/60/1, 15 amps	1/3	600 / 270
LPD-43-HG-PL2	PL	43 / 1220	52 x 31 x 78.5	48 x 26 x 57.5	8 (24" x 24")	115/60/1, 15 amps	1/3	600 / 270