

Envirco LF-530

Envirco LF-530 Horizontal Flow Clean Bench User Manual

Model: 10553

1. INTRODUCTION

The Envirco LF Horizontal Flow Clean Bench is engineered to provide a controlled, clean environment for various applications. This freestanding unit features a unique design with separate plenum and table modules, effectively isolating vibration transmission from the filter/blower console to the work surface. It is designed to establish an ISO Class 5 (Class 100) environment within its work area, adhering to the latest IEST Recommended Practices.

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your Envirco LF-530 Horizontal Flow Clean Bench. Please read it thoroughly before operating the unit.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury and damage to the unit:

- **Electrical Safety:** Ensure the unit is connected to a properly grounded electrical outlet with the correct voltage (115V). Do not operate with damaged power cords.
- **Installation:** Position the unit on a stable, level surface. Ensure adequate clearance around the unit for proper airflow and maintenance access.
- **Maintenance:** Disconnect power before performing any maintenance or cleaning. Only qualified personnel should perform repairs or internal adjustments.
- **Airflow:** Do not obstruct the airflow intake or exhaust vents. Maintain proper air velocity within the work area for optimal performance.
- **Chemicals:** Use appropriate personal protective equipment when handling chemicals within the clean bench. Ensure proper ventilation if working with volatile substances.

3. PRODUCT OVERVIEW

The Envirco LF-530 Clean Bench is designed for applications requiring a clean, particle-free environment. Key features include:

- **ISO Class 5 Environment:** Achieved through an aerosol challenged HEPA filter, ensuring high air purity.
- **Durable Construction:** Features a welded metal cabinet with a corrosion-resistant, polyurethane enamel finish for longevity.

- **Modular Design:** Two-piece construction (plenum and table modules) allows for easy passage through standard doorways during installation.
- **Quiet Operation:** Operates at approximately 65 dBA (measured 30 inches from the filter face), minimizing noise disruption.
- **Airflow Protection:** A perforated anodized aluminum diffuser screen protects the HEPA filter while maintaining uniform air velocity across the work surface.



Figure 3.1: Front view of the Envirco LF-530 Horizontal Flow Clean Bench. The unit features a large work surface, a perforated screen for airflow, and controls located on the upper right side.

4. SETUP

1. **Unpacking:** Carefully unpack all components. Due to its two-piece construction, the plenum and table modules can be moved separately for easier handling and passage through standard doorways.
2. **Placement:** Select a stable, level location away from high traffic areas, direct drafts, and heat sources. Ensure sufficient space for operation and maintenance.
3. **Assembly:** Assemble the plenum module onto the table module according to the provided assembly instructions (not detailed here, refer to separate assembly guide if applicable). Ensure all connections are

secure.

4. **Electrical Connection:** Connect the power cord to a grounded 115V electrical outlet. Verify that the power supply matches the unit's requirements.
5. **Initial Inspection:** Before powering on, visually inspect the unit for any shipping damage or loose components.

5. OPERATING INSTRUCTIONS

1. **Power On:** Locate the power switch, typically on the control panel. Turn the unit ON. The blower will start, and clean air will begin flowing horizontally across the work surface.
2. **Warm-up Period:** Allow the unit to operate for at least 15-20 minutes before beginning work to ensure the clean air environment is fully established.
3. **Working within the Bench:** Perform all work within the clean bench's designated work area. Avoid rapid movements that could disrupt the laminar airflow.
4. **Power Off:** When finished, turn the power switch to the OFF position.

6. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your clean bench.

- **Surface Cleaning:** Regularly clean the work surface and exterior with a mild, non-abrasive cleaner. Disconnect power before cleaning.
- **HEPA Filter Replacement:** The HEPA filter is critical for maintaining air purity. Replace the filter according to manufacturer recommendations or when airflow significantly decreases. Filter replacement should be performed by trained personnel.
- **Pre-filter Maintenance:** If equipped with a pre-filter, inspect and clean or replace it regularly to extend the life of the HEPA filter.
- **Airflow Verification:** Periodically verify the airflow velocity to ensure it meets specifications.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Unit does not power on.	No power to outlet; power cord disconnected; internal fuse blown.	Check power outlet and cord connection. If problem persists, contact service.
Low airflow or reduced performance.	Clogged pre-filter; dirty HEPA filter; motor issue.	Clean or replace pre-filter. If issue continues, HEPA filter may need replacement. Contact service for motor issues.
Unusual noise during operation.	Loose components; motor bearing wear.	Inspect for loose parts. If noise persists, contact service.

For issues not listed or if troubleshooting steps do not resolve the problem, please contact Envirco customer support.

8. SPECIFICATIONS

Attribute	Value
Model Number	10553 (LF-530)
Manufacturer	Envirco
Airflow Capacity	1125 CFM
Heat Output	3000 BTU/Hr
Electrical Requirements	115V
Noise Level	65 dBA +/- 3 (measured 30 inches from filter face)
Cleanliness Class	ISO Class 5 (Class 100)
Approximate Package Dimensions	70 x 65 x 53 inches
Approximate Weight	600 Pounds

9. WHAT'S IN THE BOX

Upon unpacking, you should find the following item(s) included with your Envirco LF-530 Clean Bench:

- Brush

Note: Additional components for assembly (e.g., fasteners) are typically pre-installed or included within the main packaging.

10. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries regarding your Envirco LF-530 Horizontal Flow Clean Bench, please contact Envirco customer service directly. Refer to your purchase documentation for specific warranty terms and conditions.

This product is eligible for 30-day easy returns through the retailer, subject to their return policy.