

## TECHNICAL ENGINEERING SPECIFICATION

### ■ Introduction

The Envirco LF Horizontal Flow Clean Bench is a freestanding horizontal unidirectional flow unit with a unique design concept. It consists of separate plenum and table modules that virtually isolates all vibration transmission from the filter/blower console to the work surface. It provides an ISO Class 5\* (Class 100) environment within the work area that complies with the latest IEST Recommended Practices.

### Horizontal Unidirectional Airflow

The positive pressure unidirectional airflow provides product or sample protection within the work area, which is defined by the removable clear acrylic side panels and built-in plastic laminated work surface.

### ■ Standard Features

- » Four standard sizes with 24 inch deep work areas. Custom sizes available.
- » An ISO Class 5\* environment utilizing an aerosol challenged HEPA filter.
- » A welded metal cabinet with a corrosion resistant, polyurethane enamel finish.
- » Two-piece construction allows easy passage through a standard doorway.
- » Quiet operation (65 dBA  $\pm$  3 measured 30 inches from the filter face).
- » Perforated anodized aluminum diffuser screen protects the HEPA filter while maintaining uniform air velocity within the work area.
- » Non-glare plastic laminated work surface for easy cleaning.
- » Built-in fluorescent lighting provides 150 foot candles at the work surface.
- » Clear, removable acrylic side panels.
- » Duplex electrical outlet, 115V, 15 amp on the front leg for easy access.
- » Solid state speed control with RFI suppression.

### ■ Options

- » Lab Service (work deck installed), Part No. 10231.
- » Magnehelic Pressure Differential Gauge, Part No. 10693.
- » Stainless Steel I.V. Rod, Part No. 10595 (4 ft), 10596 (5 ft), 10597 (6 ft), 10598 (8 ft).
- » UV Light Fixture, Part No. 10599 (4 ft), 10600 (5 ft), 10601 (6 ft), 10602 (8 ft).
- » Stainless Steel Work Surface, Part No. 10585 (4 ft), 10586 (5 ft), 10587 (6 ft), 10588 (8 ft).
- » Stainless Steel Side Panels (Qty 2), Part No. 830657

### ■ Warranty

- » Limited 1-year warranty.

*NOTE: Positive pressure unidirectional airflow units provide product protection only. They do not protect personnel or the environment from particulates or aerosols generated from within the work area.*



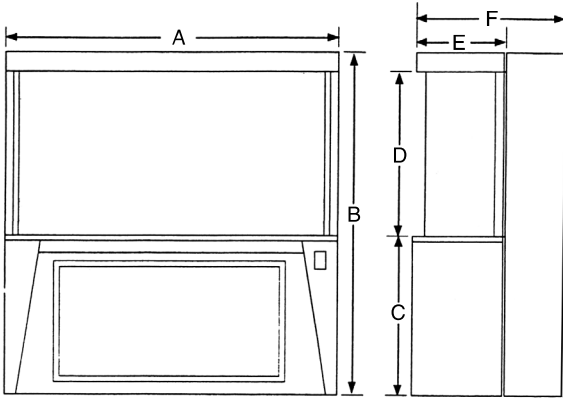
LF Horizontal Flow Clean Bench

### ■ Applications

- » Tissue Culture.
- » Sterility Testing.
- » Pharmaceutical Preparation.
- » Critical Sample Preparation.
- » Microscopy Analysis.
- » Analytical Balances.
- » Quality Control Inspection Station
- » Optical Assembly.
- » Microelectronic Fabrication and Assembly.

TECHNICAL ENGINEERING SPECIFICATION

■ Dimensional Information



Part No.	LF430	LF530	LF630	LF830	
Part No.	10552	10553	10554	10555	
Dimension Inches (mm)	A	51 (1295.4)	63 (1600.2)	75 (1905)	102 (2590.8)
	B	65 (1651)	65 (1651)	65 (1651)	65 (1651)
	C	30 (762)	30 (762)	30 (762)	30 (762)
	D	30 (762)	30 (762)	30 (762)	30 (762)
	E	24 (609.6)	24 (609.6)	24 (609.6)	24 (609.6)
	F	44 (1117.6)	44 (1117.6)	44 (1117.6)	44 (1117.6)
No. of Blowers	1	1	1	2	
BTU / Hr	3000	3000	3230	5950	
Avg. CFM @ 90 FPM (m³/hr @ 0.45 m/s)	900 (1529)	1125 (1911)	1350 (2294)	1800 (3058)	
Power Requirements Amps @ 115 V / 60 Hz	9.2	9.2	9.2	15.7	
Ship Weight, lbs. (kilograms)	590 (267.6)	600 (272.2)	760 (344.7)	1050 (476.3)	

■ Specification

**Construction**

Welded metal cabinet with exterior finished in corrosion resistant polyurethane enamel.

- » Non-glare plastic laminated work surface.
- » 1/4 inch clear acrylic side panels.
- » Adjustable leveling feet on work bench.

**Filters**

Aluminum Framed High Efficiency Particulate Air (HEPA) type, with a minimum efficiency of 99.99% @ 0.3 micron, aerosol challenged (zero probed).

**Prefilters**

Washable type, polyurethane foam - 30% ASHRAE.

**Airflow**

90 feet per minute ±10 FPM average velocity, 6 inches from diffuser screen. Uniformity ±20% of average or better.

**Motor/Blower Assembly**

Direct drive, continuous duty 1/2 Hp with sealed-for-life bearings and inherent overload protection. Motor/blower assembly is electronically (dynamically) balanced and mounted on vibration dampening rubber mounts. Motor/blower assembly is designed to provide rated airflow through a 50% increase in initial static pressure.

**Speed Controller**

Solid state speed control (with RFI suppression) for adjusting airflow velocity.

**Electrical**

Standard 15-20 amp, 115V, single phase, 60 Hz, rubber overed cord with 3-prong grounded plug. Recessed fluorescent lighting fixture provides 150 foot candles at the work surface. Separate blower and light switches. 220V, 50-60 Hz unit available with transformer.

**Envirco USA**  
101 McNeill Road  
Sanford, NC 27330, USA  
Tel: 919.775.2201  
Toll Free: 800.884.0002  
Fax: 800.458.2379  
www.envirco.com  
email: info@envirco.com

**European Sales**  
The Cavendish Centre  
Winnall Close  
Winchester, Hampshire,  
SO23 0LB, UK  
Tel: +44(0)1962.840465  
Fax: +44(0)1962.828619  
www.trion.co.uk  
email: TrionEMEAService@airsysco.com

**Asian Sales and Manufacturing**  
Building #1  
200 Middle Suhong Road  
Suzhou, Jiangsu PRC 215021  
Tel: +86.512.62587180  
Fax: +86.512.62580031  
email: info@envirco.com