PureFlow

Laminar Flow Hood

Laminar cleanliness, safeguarding critical processes

www.pureflowtec.com

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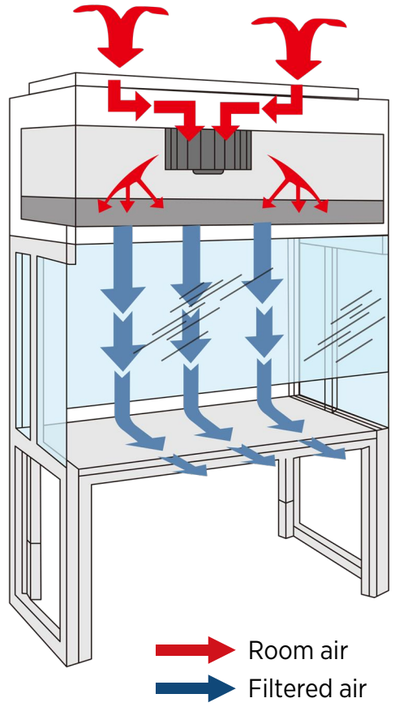
A laminar flow hood is an air purification device designed to provide a highly clean environment for localized areas. It primarily consists of an enclosure, fan, high efficiency particulate air (HEPA) filter, diffuser plate, lighting systems, and other components. The unit creates a stable unidirectional airflow (vertical/horizontal) by forcing air through HEPA or ULPA filters, effectively isolating the work zone from external contaminants while maintaining superior cleanliness standards.
This product features a compact structure and easy operation, and can be optionally equipped with lighting systems, differential pressure gauges, pre-filters, and other functional components. It is suitable for critical processes with stringent requirements, such as aseptic operations, sample protection, and precision assembly.

Working Principle



1. Air Intake

The laminar flow hood draws in ambient air through the top or rear air inlet grille. In some models, the air first passes through a coarse air filter to remove large dust particles.

2. Filtration & Purification

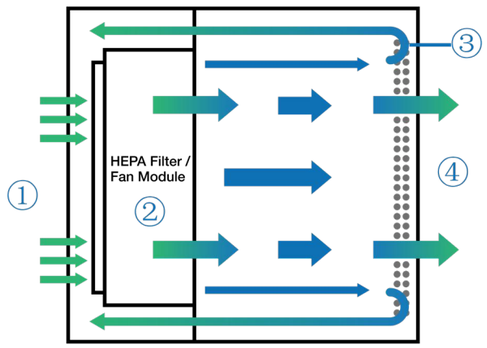
The incoming air passes through a high-efficiency particulate air (HEPA) filter (efficiency ≥99.99%@0.3 μm) or an ultra-low penetration air (ULPA) filter (efficiency ≥99.9995%@0.12 μm), filtering out the vast majority of particulates and microorganisms.

3. Formation of Laminar (Unidirectional) Flow

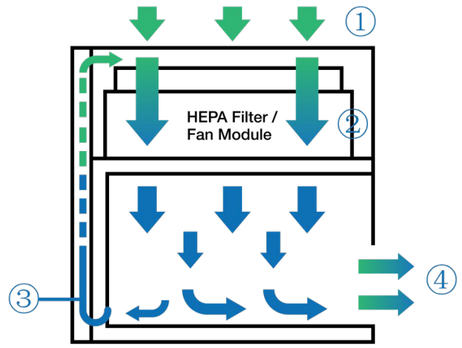
Filtered air is delivered at a constant velocity and in a constant direction from beneath the filter (vertical laminar flow) or from the front (horizontal laminar flow), forming a stable laminar airflow that pushes contaminants outward from the work zone.

4. Contaminant Removal

Particles or contaminants generated during operations are quickly swept away by the airflow instead of retaining in the work zone, thereby maintaining area cleanliness.



Horizontal



Vertical

Specifications

Material

The enclosure and all parts are constructed from SUS304.

Air Inlet

Side or top entry.

Pressure

Negative or positive pressure.

Cleanliness Class

Class A.

Average Air Velocity

0.45±20% m/s.

Noise

≤ 65 dB.

Illuminance

≥ 300 LUX.

Testing

PAO scan leak test port.

Functions

Air velocity feedback, variable frequency speed control, multi-parameter alarm system, and touchscreen operation.

Model	Rated Airflow	External Dimensions (L × W × H)	Work Zone Dimensions	HEPA Specification	Power Supply
	m^3/h	mm	mm	mm	
JLFZJ-600	600	730 × 730 × 790	1220 × 610	610 × 610 × 90 1pcs	AC 220V/50Hz
JLFZJ-1200	1200	1350 × 730 × 790	1220 × 610	610 × 610 × 90 2pcs	
JLFZJ-1800	1800	1350 × 1030 × 790	1220 × 915	915 × 610 × 90 2pcs	
JLFZJ-2400	2400	1350 × 1350 × 790	1220 × 1220	1220 × 610 × 90 2pcs	
JLFZJ-4800	4800	2830 × 1030 × 790	2440 × 915	915 × 610 × 90 4pcs	

Application

Widely used in industries requiring stringent air cleanliness standards, including pharmaceuticals, biological laboratories, electronics manufacturing, and precision instrument assembly.

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