

Lab - K Fume Cupboard



Introduction

Laboratory work often involves handling volatile chemicals that release harmful fumes, posing serious health risks. The Lab-K Fume Cupboard is designed to protect lab personnel by ensuring effective containment and removal of hazardous substances. With a highly efficient airflow system and advanced safety features, Lab-K fume cupboards provide a superior solution for laboratories looking for safety, durability, and energy efficiency.

Why Choose Lab-K Fume Cupboards?

- ✓ Optimal Safety & Protection – Prevents the inhalation of hazardous fumes, reducing health risks.
- ✓ Advanced Airflow Control – Aerodynamic fascia, internal baffles, and air bypass mechanisms ensure smooth, controlled airflow.
- ✓ Customizable Design – Available in multiple sizes and configurations to fit different laboratory setups.
- ✓ Durable & Chemical-Resistant Build – Constructed with high-quality materials such as ceramic worktops (heat-resistant up to 800°C) for long-lasting use.
- ✓ Energy-Efficient Options – Equipped with Variable Air Volume (VAV) control systems to optimize energy use and reduce operational costs.
- ✓ User-Friendly & Low Maintenance – Easy-to-access service panels, touchscreen controls, and ergonomic designs make operation and maintenance simple.

Key Features & Specifications

1. High-Performance Airflow & Safety System

- ◆ Aerodynamic Fascia – Improves airflow efficiency and enhances safety.
- ◆ Air Bypass Mechanism – Prevents gas leaks during thermal fluctuations.
- ◆ Internal Baffles – Ensures balanced air movement for optimal fume extraction.
- ◆ Built-In Alarm System – Alerts users to airflow or fume exposure issues, with multiple customization options available.

2. User-Friendly & Convenient Operation

- ◆ Ergonomic Controls – Service controls are mounted on the front fascia for quick and easy access.
- ◆ Touchscreen Control Panel – Adjust fan speed, lighting, and other functions effortlessly.
- ◆ Safe Sash Design – Vertically sliding sash with a timing belt mechanism to prevent accidental falls.

3. Robust & Durable Construction

- ◆ Worktop Options – Ceramic (heat-resistant up to 800°C), Phenolic Resin, or Polypropylene worktops available.
- ◆ Toughened Glass Sash – 6mm safety glass, with optional safety film or alternative materials (PVC, acrylic, polycarbonate).
- ◆ Rear Baffle System – Specially designed for handling heavy corrosive fumes, ensuring efficient extraction across the chamber.
- ◆ Epoxy-Coated Metal Base Cabinet – Corrosion-resistant storage with removable service access panels.

4. Standard & Custom Sizes Available

Lab-K Fume Cupboards come in three standard sizes, but custom sizes and specifications can be designed to fit specific laboratory needs.

Model	AERO 1.2	AERO 1.5	AERO 1.8
Overall Length	1200 mm	1500 mm	1800 mm
Overall Height	1700 mm	1700 mm	1700 mm
Overall Depth	850 mm	850 mm	850 mm
Opening Length	1100 mm	1300 mm	1600 mm
Recommend Air Flow	700 - 900 cfm	900 - 1100 cfm	1100 - 1300 cfm
Recommend Duct Size	200 mm	200 mm	250 mm

Lab-K Fume Cupboards are suitable for a wide range of laboratory applications, including:

- ✓ Chemical Research & Analysis – Safe handling of acids, organic solvents, and hazardous chemicals.
- ✓ Pharmaceutical & Biotech Labs – Protection from reactive and toxic compounds.
- ✓ Educational Institutions & Universities – Ensures student and staff safety during lab experiments.
- ✓ Industrial & Manufacturing Facilities – Effective for production environments with airborne chemical exposure.

Why Invest in Lab-K Fume Cupboards?

- ✓ Enhanced Safety & Protection – Reduces exposure to hazardous substances.
- ✓ Energy-Efficient & Cost-Effective – VAV system saves electricity while maintaining optimal performance.
- ✓ Customizable Solutions – Tailored to fit your specific lab needs.
- ✓ Durable & Long-Lasting – High-quality construction ensures longevity.
- ✓ Trusted Supplier – A reliable choice for laboratories worldwide.

Construction Specification



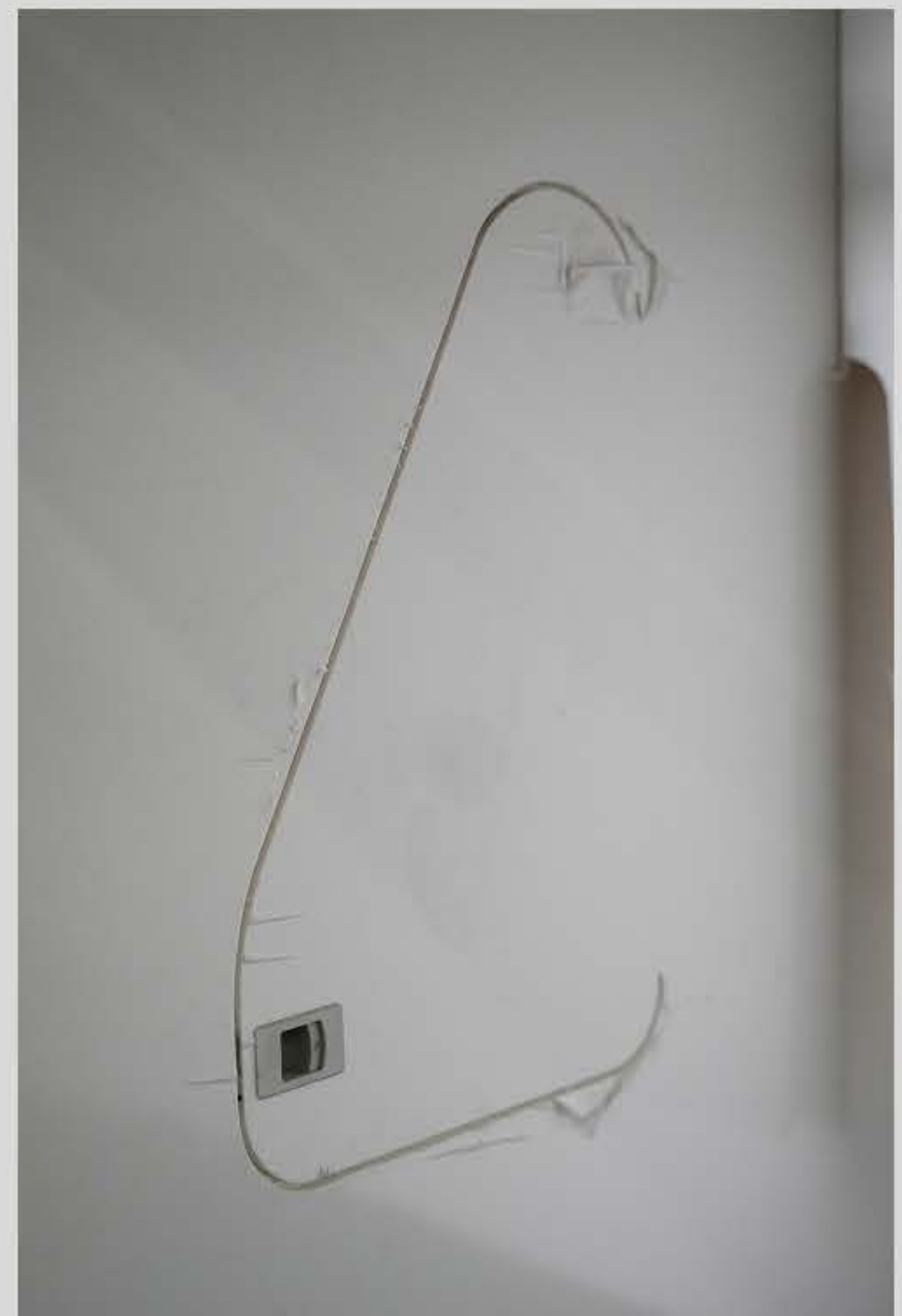
Front Facial

Manufacture the fume cupboard front fascia from molded sections with airfoil entry on the sides, top and bottom. Fitted with touch screen control for fan, light and other services.

Inner Chamber

The chamber is contoured towards a rectangular suction box extraction outlet to assist in an even extraction rate across the width of the opening.

Rear Baffle



Light

The T5 LED light is mounted on inner chamber to. It illuminates the interior of the work area.



Work Tops

The work surface is Ceramic worktop that can stand up to 800 degree celsius. It is sealed to the inner chamber to prevent any leakage. Other material worktop was available upon request.



Phenolic Resin Top



Ceramic Top



PP (Polypropylene Top)

Services

Various remote-controlled services can be fitted to the fume cupboard facial. All handles are fitted with color-coding to the International Standard. All internal outlets are mounted on the sidewalls to retain maximum working area and are color coded with an electrostatically applied epoxy finish. Compressed air, gas, nitrogen, vacuum, etc. control valve incorporates on Easy Remove Service Panels for easy maintenances. Services are pre-plumbed within the fume cupboard with 1/2" flexible hose for easy connection to main service by the site plumber.





Sash

The counter- balanced sash windows are of the vertically sliding sash type supported on timing belt and running on two pulleys. The sash counter-weights run inside a fully enclosed profiled section. Sash windows are 6mm toughened glass. As an option the sash glass can be covered with safety film. Alternatively, clear PVC, acrylic or polycarbonate can be supplied.

Rear Baffle

The chamber of the fume cupboards can be fitted with a specially designed back baffle fastened to the fume cupboard with polypropylene bolts, it is removable for cleaning purposes. This special back baffle allows for the whole chamber to be scavenged whether heavy or light corrosive fumes are present. The back baffle is recommended if it is anticipated that a lot of heavier-than-air fumes are to be used continuously in the fume cupboard.



Chemical Resistant Centrifugal Fan

The PP (Polypropylene) Chemical Resistant Centrifugal fan is direct coupled onto a 4 pole, 3 phase 415V 50hz motor. The impeller is a forward curved multi-blade one-piece injection molded Polypropylene incorporating a steel reinforced hub.



Base Cabinet

The base cabinet is made from epoxy powder coated metal, it comes complete with hinged doors, removable service access panels and facial panel to suit services and fittings and kicker strip.



