

# Laminar Flow Fume Cupboard

Clean bench functionality with the benefits and safety of a fume cupboard.



TION's Laminar Flow Fume Cupboards protect both the sample and the user by combining modern airflow technology with specialist fume extraction equipment.

A laminar flow fume cupboard is a laboratory ventilation device similar to a Class II B2 biosafety cabinet in its airflow pattern. Its primary function is to shield the operator from harmful vapours and the sample from cross contamination. This includes fumes and particulates generated during the scientific process. It achieves this by creating an uninterrupted stream of laminar flow air over the work surface from the top of the cabinet using a HEPA filter, which is then exhausted into the atmosphere.

## **Key Benefits:**

- → Polypropylene Construction
- Safe & Compliant
- ISO5 & ISO4 Cleanliness
- Customisable Dimensions



# **Eco-Friendly LED Lighting**

Sealed LED lighting offers eco-friendly, cost-effective 800 LUX illumination.



## **Intuitive 9" Control Panel**

Control and fine tune your working environment with built in airflow controls and alarm systems.



## **Sample & User Protection**

The cabinet's internal fan creates a smooth stream of downflow air to create an ISO5/4 cleanroom environment.



# 100% Polypropylene Carcass

Medical-grade welded polypropylene eliminates carcass corrosion with V0 flame retardant properties.



#### **Bespoke Work Surface Materials**

Select your work surface material from a variety of options including, polypropylene, stainless steel and ceramic.



### **Red-Light Alarm System**

Our programmable red-light alarm system monitors your cabinet's internal airflow, alerting your staff to a potential fault.



TION's laminar flow fume cupboards are customisable systems prioritising technology and ergonomics. If your cabinet requires specific materials or functionality that is not listed below, contact our solution design team on 01223 790028.

## **Duct Connection**

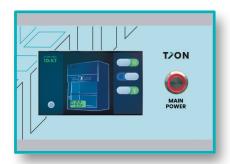


- Fishtail outlet
- 250mm or 315mm size



WITH THE PROPERTY OF

#### **Touch-Screen Control Panel**



- Available in 7 (Standard/Essential model) or 9 (Pro model) inches
- Airflow velocity display
- Low airflow alarm display
- Fan control on/off
- Calibration settings
- Energy-efficient "Eco Mode"

## Variable Air Volume & Auto Sash



- Only available on the 9" Pro panel
- Air volume is controlled based on the cabinet's face velocity
- · Comms with electronic dampers
- Configurable PID-controlled auto-closing sash
- BMS connection enabled

## **Base Cabinets**



- \*Polypropylene hinges
- Vented storage cabinets
- 90-minute cabinets
- Drawer units
- · Height adjustable stand
- Custom / hybrid options

#### **Louvred Rear Baffle**



Improved performance through smoothing of inflow air



# **Red Light Alarm System**

- · Real-time airflow monitoring
- Visual and audible alarm
- Programmable



# **Weighted Sash**

- Toughened glass
- \*Sash handle designed for optimum airflow
- Reinforced Polyester belt



## **Custom Accessories**

- Taps
- Sinks
- \*Power outlets
- Centrifugal fans





#### Worksufaces

- Polypropylene
- Stainless steel
- Ceramic



# **Polypropylene Carcass**

- 100% corrosion resistant
- Sustainable
- · Lightweight & durable



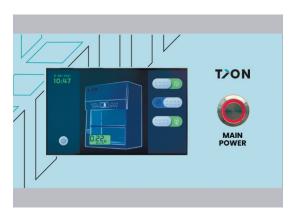




The TION control system and software are manufactured in-house, working as one centralised unit. This removes the breakdown potential between third-party systems and provides greater design flexibility.

Thanks to its touch-screen functionality and form factor, no buttons or manual switches are required.

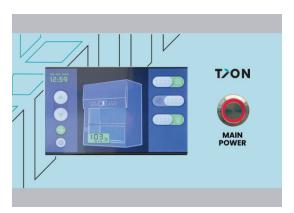
The control system is available in two types:



# Standard/Essential 7" Touch Screen Panel

The TION Standard and Essential ranges include a full colour, 7" touch-screen control panel that includes:

- Airflow velocity display
- Hour counter for filter
- Filter replacement & low airflow alarm
- Calibration settings



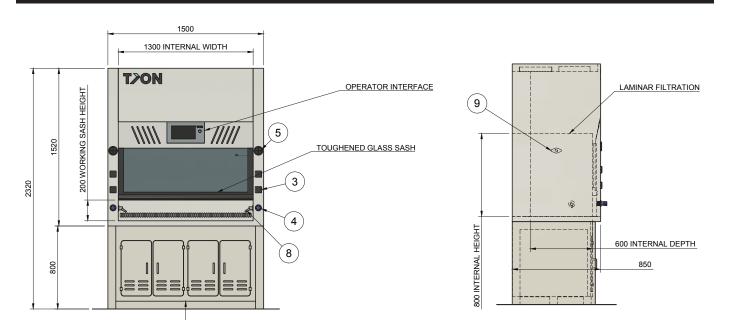
#### **Pro 9" Touch Screen Panel For VAV**

The pro version comes with a 9" panel which provides all of the features of the 7" panel and also enables:

- ➤ VAV control
- **>** Chemical sensor
- Temperature & humidity sensor



# Laminar Flow Fume Cupboard Technical Data



Design Data						
Cabinet Material	Medical-Grade Welded Polypropylene					
Work Surface Material	Medical-Grade Welded Polypropylene					
Internal Lining Material	Medical-Grade Welded Polypropylene					
Design Life	20 Years					
Technology	Optional constant air velocity/variable air velocity					
Electrical Data						
Master Supply	1Ph/13A/240V/50Hz					
Slave Supply	As required					
Power Outlets	4 x 1Ph/3A/240V/50Hz					
Safety Equipment						
Fire Suppression	Optional Co2/powder					
Emergency Stop	Optional external interlock					
Operational Data						
Max Sash Height	600 mm (unless otherwise specified)					
Sash Work Height	500 mm (unless otherwise specified)					

**Disclaimer**: Technical Specifications may be subjected to further changes without notice.





# Standard & Pro Laminar Flow Fume Cupboards

Our laminar flow fume cupboards are available in two separate ranges, standard and pro. The only distinction between these ranges lies in the control system functionality and screen size, as listed below.

Spec/Model	LAFFC1200	LAFFC1500	LAFFC1800	LAFFC2000	LAFFC2500		
Laminar Flow Fume	Cupboard: Stan						
External Size WxDxH (mm)	1200 x 850 x 2320 mm 47.3 x 33.4 x 91.3"	1500 x 850 x 2320 mm 59.0 x 33.4 x 91.3"	1800 x 850 x 2320 mm 70.9 x 33.4 x 91.3"	2000 x 850 x 2320 mm 78.7 x 33.4 x 91.3"	2500 x 850 x 2320 mm 98.4 x 33.4 x 91.3"		
Workspace: Rear Baffle To Aerofoil WxDxH (mm)	1000 x 600 x 800 mm 39.4 x 23.6 x 31.5"	1300 x 600 x 800 mm 51.2 x 23.6 x 31.5"	1600 x 600x 800 mm 63 x 23.6 x 31.5"	1800 x 600 x 800 mm 70.8 x 23.6 x 31.5"	2300 x 600 x 800 mm 90.5 x 23.6 x 31.5"		
Stand Dimensions WxDxH (mm)	1200 x 820 x 800 mm	1500 x 820 x 800 mm	1800 x 820 x 800 mm	2000 x 820 x 800 mm	2500 x 820 x 800 mm		
Front Sash Max Opening (mm)	600 mm / 23.6"						
Front Sash Working Height (mm)	500 mm / 19.6"						
Certification	Class 100/ISO 5 - EN - 14175/ASHRAE 110-1995						
Air Velocity	0.5±0.1 m/s, 100±20 FPM						
Cabinet Material	Polypropylene						
Work Table Material	Ceramic/Polypropylene/Stainless Steel						
Control System	7" full-colour touch screen with air flow velocity, low airflow alarms, fan controls and calibration settings						
Optional Control System (Pro Model)	9" full-colour touch screen with VAV controls						
Power Supply Options	110/220V, 50/60 Hz, includes a single phase power supply. A three-phase power supply can be ordered						
Illumination	800 LUX eco-friendly LED lighting						
Customisation Options	Taps: (water, gas nitrogen, vacuum, others), sinks, sumps, shelves, multi-sash, partitions, glove apertures, dimensions, storage and height adjustable stands						





#### **Discover**

This includes an extensive breakdown of key project budgets, such as building specifications, processes, workflows, and the laboratory itself. We understand the importance of capturing project details early on to reduce the chance of price complications and extended timelines.



## **Develop**

During the development stage, you will collaborate and engage with core TION personnel and project stakeholders to develop a solution that's fit for purpose within your chosen space. Our aim is to alleviate any concerns or potential roadblocks and arrive at a final specification.



#### **Deliver**

Deliver is where the rubber meets the road, and we transform your build space into a cutting-edge laboratory. Our delivery personnel will coordinate with your team to ensure that every step of the program is clear and delivered on time by working closely with on-site contractors.



#### **Maintain**

Completing a project is really the first step. Ensuring reliability and consistency of communication following a project is paramount. Everything from asset registration, job logging, PPM (Planned preventative maintenance) is covered by our methodology.

