



OPTIMAX 4 Fume Cupboard



ISO 9001
ISO 14001
ISO 45001





The OPTIMAX 4 fume cupboard is a fusion of modern technology, eco-conscious design, laboratory safety, and enhanced user experience.

Clean Air never compromises on safety. Not only is the OPTIMAX 4 packed with all the user-friendly features you expect from our fume cupboards, the OPTIMAX 4 is the first fume cupboard to be optimised for containment using advanced 3D Computational Fluid Dynamics (CFD).

This fume cupboard builds on the positive feedback from lab teams for Clean Air's popular APEX series of fume cupboards. The OPTIMAX 4 benefits from glass to three sides of the internal chamber. Substituting glass for traditional twin-skinned walls allows more light in and adds space to the chamber, so the operator enjoys a larger, lighter, brighter working area experience.

When it comes to laboratory apparatus, size matters. The compact height of the OPTIMAX 4 means the benefits of the APEX series fume cupboards can now be delivered in smaller labs.

All this as standard

- Carcass constructed from polyester-coated zintec steel.
- Interior liners & baffles from Trespa® TopLab® BASE solid grade laminate, complete with toughened glass side panels.
- Electrics pre-wired to a 5-way consumer unit complete with built-in RCBOs & MCBs.
- Energy-efficient, long-life LED flat panel lighting.
- Cast epoxy worktop with raised edges
- Visual and audible low airflow alarm
- Water and gas services
- Power sockets as standard
- 316-grade stainless steel hinged lower aerofoil for cable entry.
- 316-grade stainless steel tissue guards to prevent debris from being drawn into the extract ductwork.
- State-of-the-art appearance and a choice of colours.
- 12-month free warranty.

Controls

- Advanced programmable control panel
- Alarms for air velocity, sash high, and fan operation
- Alarm levels reported on the display
- BACnet MS/TP and Modbus RTU available

Servicing

A Clean Air service includes much more than simply face velocity testing – ask us for details

- Full service and maintenance packages available
- Options to lock in prices
- Highly trained test engineers
- Never over-run your test date with our free test scheduling service
- Most makes and models of fume cupboard serviced

Customise to your application

- Bench-mounted, walk-in, & height adjustable models
- Bespoke and larger size units are available on request – tell us your preferred dimensions
- Variable Air Volume (VAV) technology for energy efficiency, Constant Air Volume (CAV), and Low Flow designs
- Recirculating carbon-filtered systems where ductwork cannot be installed
- Automatic sash closure with PIR presence sensor
- Automatic fire suppression system (dry powder, CO2, or foam)
- Worktops from cast epoxy, Trespa® TopLab® PLUS, ceramic, stainless steel, polypropylene or PVC-u
- Broen, Vacuubrand and Spectrolab services
- Drip cups and sinks
- Standard single socket outlets, commando socket outlets, data sockets and emergency stop button
- Alternative sash configurations including framed sash, framed sash with horizontal sliding glass panels, split sash, triple sash and combination sash systems
- Scaffold bosses (polypropylene or stainless steel) and scaffold frames
- Polypropylene tissue guards
- Standard steel storage cupboards, polypropylene acid storage cupboards, fire-rated solvent storage cupboards or vac pump cupboards
- Pass through ports in side panels or from front panel into the chamber
- Anti-shatter film for glass panels
- Colour matching to your branding in RAL colours

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Technical Specification

Computational Fluid Dynamics (CFD) for containment

Using advanced 3D CFD techniques we have optimised and tested aspects of the OPTIMAX 4 design. Scientific data results prove it takes less than 90s to remove 99.9% of contaminants from the entire fume cupboard chamber and we can use our evidenced modelling to show you the most effective way to use your fume cupboard.

With our unparalleled data-driven insights into fume cupboard performance we can offer the best containment protection for your operators.

Breakout Rate Table

Distance inside OPTIMAX 4	Result
0mm	79.58 ppm/s
100mm	3.86 ppb/s
150mm	3.33 ppb/s
200mm	1.62 ppb/s

The OPTIMAX 4 fume cupboard comes in standard sizes and can also be manufactured to your bespoke size requirements – just ask us for more information

Dimensions OPTIMAX 4

External width	1000mm	1200mm	1500mm	1800mm	2000mm	2400mm
External height	2375mm (2592mm Sash Fully Open)					
External depth	900mm					
Chamber width	965mm	1165mm	1465mm	1765mm	1965mm	2365mm
Chamber Height	1280mm (Worktop to Soffit)					
Chamber depth	640mm (Sash to Baffle)					
Sash Opening Width	700mm	900mm	1200mm	1500mm	1700mm	2100mm
Max Sash Opening Height	790mm					

Extract Volumes

	Face Velocity	1000mm	1200mm	1500mm	1800mm	2000mm	2400mm
Extract Volumes at a 400mm sash opening	0.3m/s	0.101m ³ /s	0.130m ³ /s	0.173m ³ /s	0.216m ³ /s	0.245m ³ /s	0.303m ³ /s
	0.35m/s	0.118m ³ /s	0.152m ³ /s	0.202m ³ /s	0.252m ³ /s	0.286m ³ /s	0.353m ³ /s
	0.4m/s	0.135m ³ /s	0.173m ³ /s	0.231m ³ /s	0.288m ³ /s	0.327m ³ /s	0.404m ³ /s
	0.5m/s	0.168m ³ /s	0.216m ³ /s	0.288m ³ /s	0.360m ³ /s	0.408m ³ /s	0.504m ³ /s
Extract Volumes at a 500mm sash opening.	0.3m/s	0.126m ³ /s	0.162m ³ /s	0.216m ³ /s	0.270m ³ /s	0.306m ³ /s	0.378m ³ /s
	0.35m/s	0.147m ³ /s	0.189m ³ /s	0.252m ³ /s	0.315m ³ /s	0.357m ³ /s	0.441m ³ /s
	0.4m/s	0.168m ³ /s	0.216m ³ /s	0.288m ³ /s	0.360m ³ /s	0.408m ³ /s	0.504m ³ /s
	0.5m/s	0.210m ³ /s	0.270m ³ /s	0.360m ³ /s	0.450m ³ /s	0.510m ³ /s	0.630m ³ /s



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