

Designed for the professional laboratory, TPE's **EcoAir® Fume Cupboard** provides proven fume extraction technology with innovative energy-saving features. EcoAir®, using a variable air volume (VAV) system, is available in a wide range of sizes and with options to suit the most demanding environments. The EcoAir® Fume Cupboard fully complies with AS/NZS 2243.8 (2014) standards.

Ecoair®, the ultimate fume cupboard:

- ▶ Variable Air Volume (VAV) technology for quiet and economical operation
- ▶ Available in multiple sizes and flexible design options
- ▶ Available with Ecosash® – energy and safety technology for automatic sash lowering and minimal loss of conditioned air from the laboratory



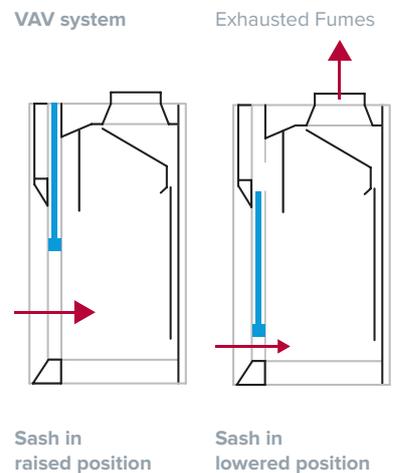
EcoAir® laboratory fume cupboard.

Shown on the right is one of many EcoAir® fume cupboards going into in a new building. This one has the available split sash. Also fitted with an optional EcoSash®, this fume cupboard's Motion Sensor panel is visible above the sash.

The Advantages of Variable Volume

1. The cost of air conditioning or heating a laboratory increases as air is exhausted from the room through the fume cupboards.
2. A fixed volume fume cupboard exhausts the same total amount of air whether the sash is up or down because the fan speed is constant.
3. The lower the sash height, the less air needs to be exhausted through the fume cupboard to properly evacuate fumes and conform to safety standards.
4. So, if fan speed could be made variable – automatically reduced for lower sash heights:
 - a. Less air would be needlessly exhausted, and
 - b. The cost of replacing conditioned air would be reduced, and
 - c. The fan and wind noise at the fume cupboard would be reduced.

Because of these potential advantages, TPE developed its Variable Air Volume (VAV) system. TPE's VAV system continually monitors the sash position, and adjusts the fan speed to maintain the proper 0.5m/s face velocity to suit the sash height. As a consequence, TPE's EcoAir® fume cupboard exhausts less air than a standard fume cupboard and does so operating more quietly and saving air conditioning costs.



Fan speed continually adjusts to suit sash height, so the required 0.5m/s face velocity is maintained.

EcoAir® is available with an optional EcoSash® system which automatically lowers the sash after a period of inactivity. With EcoSash®, the efficiency of the EcoAir® VAV fume cupboard system is dramatically improved.

Specifications

EcoAir® Advanced Air® Fume Cupboards

Sizes	1200mm	1500mm	1800mm	2000mm	4000mm
Overall Height	1380mm	1380mm	1380mm	1380mm	1380mm
Overall Depth	750mm	750mm	750mm	750mm	750mm
Internal Height	1160mm	1160mm	1160mm	1160mm	1160mm
Internal Depth of Work Top	570mm	570mm	570mm	570mm	570mm
Design Face Velocity	0.5 metres/second				

Variable Volume Flow Rate: (Sash at 500mm working height)	265 Litres/sec	340 Litres/sec	415 Litres/sec	465 Litres/sec	960 Litres/sec
Variable Volume Flow Rate: (Sash Fully Closed)	65 Litres/sec	80 Litres/sec	105 Litres/sec	115 Litres/sec	235 Litres/sec

Work Top Material	Compact Laminate Work Surface				
Available Work Area	969 x 535mm	1269mm x 535mm	1569mm x 535mm	1769mm x 535mm	3769 x 535mm
Construction Design	Fascia proprietary extruded aluminium with additional base beam protection. Double skin uPVC (standard). Double skin with poly-propylene internal lining optional.				
Sash Material	5mm Toughened Glass (Spit Sash)				
Control System	Advanced Air® Variable Air Volume Controller with LCD type display				
Internal Pre-wiring	Fully pre-wired				
Power Supplies	230V Single-Phase (standard); options available for various countries				
Water Services	Cold Water, Hot Water, RO Water, PP sinks, SS sinks				
Dry Services	Natural Gas, Nitrogen, Compressed Air, Vacuum, Argon, others available				
Power Points	10-Amp Singles, 15-Amp Doubles; other special types available				
Power Savings	EcoSash® option available				

Options

- ▶ EcoSash® for automatic sash lowering and maximum energy savings.
- ▶ Steel, powder-coated frame under-bench—locates work surface at standard bench height.
- ▶ Scaffold System, adjustable stainless steel rods with polypropylene connectors.
- ▶ Special work surface material as needed, including sinks.
- ▶ Electrical, plumbing, and gas services added as specified.
- ▶ Side-view glass windows.
- ▶ Two side-by-side sashes for a single fume cupboard or manifold systems.
- ▶ Water spray system.



EcoAir® laboratory fume cupboard.