

FUME HOOD (AERODYNAMIC DESIGN)

KEY FEATURES

Airfoil Design

- Rounded airfoil profile at the worktop edge.
- Guides air smoothly into the hood, minimizing turbulence.
- Design As per Accordance to ASHRAE 110-1995)

Bypass Mechanism

- Maintains constant airflow even when sash height changes.
- Prevents high face velocity when sash is lowered

Optimized Baffle System

- Multi-slot baffles at back panel for uniform airflow.
- Captures light, medium, and heavy vapors efficiently.

Sash System

- Vertical, horizontal, or combination sash.
- Shatter-resistant toughened glass.
- Often counterbalanced for smooth operation.

Worktop & Construction

- Aerodynamic raised edges prevent spills from reaching user.
- Chemical-resistant surface of granite (Black)
- Ergonomic design for operator comfort

Airflow Efficiency

- Designed for face velocity of 0.4–0.6 m/s (80–120 fpm).
- Stable airflow pattern reduces risk of fumes escaping.
- Energy-efficient – consumes less exhaust air compared to older designs.

Lighting & Visibility

- Flush-mounted LED/fluorescent light (no glare, shadow-free)

Safety & Monitoring

- Airflow monitor with alarm for low/high velocity.
- Sash position indicator / alarm.
- Explosion-proof electrical fittings (if need)



TECHNICAL MATRIX

Model No	PTE AFH 813A	PTE AFH 813B	PTE AFH 813C	PTE AFH 813D	PTE AFH 813E
Working Table Size	2' x 2'	3' x 2'	4' x 2'	5'x2'	6' x 2'
Inner Size (WxDxH)	2' x 2' x 3'	3' x 2' x 3'	4' x 2' x 3'	5'x2'x3'	6' x 2' x 3'
No. Of Motor/Blower	1	1	1	1	2
Illumination	1 x 20 w	1 x 20 w	1 x 40 w	2x40 w	2 x 40 w
Design	Aerodynamic				
MOC	Mild steel Duly Powder Coated / Stainless Steel / Polypropylene				
Type	Floor Model type				
Air foil	Horizontal placed on work top				
Valves	Remotely operated Color Coded Valves for Gas / water / and vacuum				
Working Table Top	Fitted with Granite Skirting black top and Ceramic taps and nozzle with sink which is acid resistant				
Baffle arrangement	Three layer for exhaust light , heavy & mild fumes				
Motor and Blower	1 HP Single Phase TEFC, IP55 Class F Continuous Rated				
Suction capacity	Air suction capacity is 800+/- 20 CFM				
Maintenance	Panel For Utility Valve which is operated from Outside only				
Base Cabinet	Complete Rigid Steel structure to support fume hood with drawers and cupboards having trays for keeping / storing chemicals with self closing hinges				
Front Door	Vertical rising sash counter-balanced with pulley and counterweight system. Toughened Float Glass sash (4 mm thick). Smooth and light sash operation. Clear openable height = 750 mm				
Standard Accessory	Electrical Switches 15/5 amp socket with MCB switches fire retardant				
Electric Supply	AC 230V , 50/60Hz				

OPTIONAL ADD ONS

- Airflow monitor / alarm (for low face velocity)
- Sash position sensor with alarm
- Scrubber
- Emergency power off (EPO) switch
- Horizontal or combination sash
- Motorized sash with auto-closing mechanism
- Acid/corrosive storage cabinet (polypropylene lined)
- Emergency eye-wash or safety shower
- FRP / PRL Inner Lining