



SERIES 2000 FUME CUPBOARD SPECIFICATION



ACCREDITED FOR
**TECHNICAL
COMPETENCE**

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SAFE-TEE SERIES 2000 FUME CUBOARD SPECIFICATION



A TYPICAL SPECIFICATION

Fume cupboards shall be Conditionaire Safe-Tee Series 2000 bench-mounted type and shall comply with the following Australian/New Zealand Standards, as listed below:

- AS/NZ2243.8, Safety in laboratories (fume cupboards)
- AS/NZ2430.3, Classification of hazardous areas
- AS/NZ1530.3, Methods for fire testing building materials, combustibility test for materials
- AS/NZ3000 Electrical Installation (wiring rules)
- AS/NZ2208 Safety glazing material

The Series 2000 fume cupboard contained in the specification must have all the outstanding features listed below.

Dimensions

This fume cupboard shall have the following external dimensions, as listed below:

- 1200mm
- 1500mm
- 1800mm
- 2000mm
- 2100mm



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Fume Cupboard Construction

The Series 2000 fume cupboard contained in the specification must have all the outstanding features listed below.

Aerodynamic Front Facia

The front facia shall be a picture frame type with aerofoil entry on all sides, top and bottom and be manufactured in one (1) piece from a chemical resistant and flame retardant EPC. The front facia shall extend the full height of the fume cupboard and the enclosure for the wiring and controller must be fully enclosed.

Back Baffle

The front facia shall be a picture frame type with aerofoil entry on all sides, top and bottom and be manufactured in one (1) piece from a chemical resistant and flame retardant EPC. The front facia shall extend the full height of the fume cupboard and the enclosure for the wiring and controller must be fully enclosed.

Fume Cupboard Base

The working base of the fume cupboard shall be a chemical resistant laboratory grade TRESPA Top Lab Plus in a white finish and will form an integral part of the fume cupboard body with a smooth finish, and be crevice free area with no sharp corners. The front section of the fume cupboard base, shall have an aerodynamic anti spill lip.

Chamber Materials

The inner chamber shall be manufactured from "ASAH®" material with a smooth radius on all internal corners and comply when tested to AS1530.3

Front Sliding Sash

This fume cupboard shall be provided with 6mm toughened sliding glass sash, which will be independently balanced and supported by a stainless steel cable, running on ball bearing plastic pulleys.

The front handle shall be the full width of the fume cupboard sash and be aerodynamic design.

Fume Cupboard Lighting

The fume cupboard shall be complete with LED lighting and must illuminate the fume cupboard work area by a minimum of 400 LUX. These LEDs must be outside the air stream and will be sealed by a 6mm toughened glass and will be recess to the roof of the fume cupboard chamber.



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Remote Control Services, Sinks

Flammable gases, inert gases and water services shall be supplied as scheduled or as shown on the drawings. The outlets are to be mounted on the inner side walls of the chamber and the control valves shall be mounted on the fascia panel of the support bench so they do not cause turbulence at the face entry. Flammable gas supply shall be fitted with a solenoid valve to isolate supply in the event of low airflow or emergency isolation.

The control valve shall be easily removable at all times for access to the 316# Stainless steel braided hose and fittings. The outlet will be side wall mounted to achieve the maximum working area.

- Cold Water
- Hot Water
- Nitrogen- N2
- Compressed air CA
- GAS
- Double 10 amp power points with neon
- uPVC Sinks
- PP Sinks
- SS sink
- (Client to nominate service required)



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Fume Cupboard Control Panel And Power Points

The fume cupboard shall be fitted with a, user friendly, "Safe-Tee" control system with LCD display which indicates the status of the system. The controller shall comply fully with AS/NZS 2243.8, AS/NZS 2430.3.6 AND AS/NZS 3000. The "Safe-Tee" controller is to be used for variable airflow. The control system will incorporate two (2) RCD protected DGPOs.

The Safe Tee control panel shall be state of the art system and must exceed and perform all the functions as nominated in the following standards AS/NZS 2243.8, AS/ANZ 3000 and AS/ANZ 2430.3.6.

The Safe Tee control panel shall be complete with the following functions:

- LCD screen
- Back light
- Touch Screen display
- Light function
- Real time and date
- 60second counts down display (pre-purge)
- 20 minute count down display (post-purge)
- IVAC infinitely variable airflow function
- Emergency isolator and remote emergency isolator
- Boost Function
- Heat sensor/fire alarm function

Cable Ports

Cable port entries, if scheduled, shall be fitted in the side of the fume cupboard a minimum of 150 mm above the base. They are to have a self-sealing neoprene star gasket fitted.

Infinitely Variable Air Control System (IVAC)- If required

The fume cupboards shall be supplied and fitted with the (IVAC) energy saving control system.



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This system shall be infinitely variable in relation to the fume cupboard sash position; this system will be capable of comparing the fume cupboard face velocity to achieve the recommendation of 5 air changes per minute along with the average face velocity of not less than 0.5 m/s, when measured in accordance with appendix B.

The IVAC system shall also have the function to identify any airflow faulty at any sash position, this will allow the extraction fan to ramp up to maximum speed this function will also be available if the emergency push button is activated or the control panel boost function is also activated.

This IVAC system will achieve savings by infinitely varying the extraction fan speed in relation to the fume cupboard sash position, therefore reducing the air quantity, whilst maintaining a constant face velocity

Please note:

Two speed motors or limit switched will not be allowed

Commissioning

Commissioning and NATA testing is to be carried out by NATA accredited personnel and shall be in accordance with AS/NZS 2243.8, Appendixes A, B & F. All auxiliary systems within the laboratory shall be operational, as for the working laboratory, prior to commissioning being carried out.

Centrifugal Chemical extraction fan

Centrifugal chemical extraction fan, single inlet, direct driven, constructed from uPVC material and with at least 20% reserve airflow capacity.





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Complete with the following items:

- Polypropylene forward curve fully balanced impeller
- 4 pole, 3 phase, 415 volt **(IP55)** electric motor (outside the air stream)
- Weatherproof motor cover
- Weatherproof isolation switch **(IP66)**
- 25mm drain point located at the bottom of the fan scroll

Support Open Frame

Support open frame, which is designed to house the Conditionaire fume cupboard, manufactured in of 40 x 40 RHS Mild steel constructions and complete with front facia panel and will be finished in White polyurethane and will be complete with adjustable feet. This frame must be designed to allow chemical storage cabinets to fit underneath.

OR

Enclosed Steel Bench Support

Support Under bench, which is designed to house the Conditionaire fume cupboard, manufactured in mild steel construction and complete with centre shelf, sliding doors and facia panel and will be finished in White epoxy and adjustable feet. Mechanical ventilation available

Please Note: For further information or technical data please call our Head office on (02) 97743355