

CONTAINMENT WITHOUT LIMITATIONS

RE-CIRCULATING & DUCTED
FUME CUPBOARDS



LABCAIRE
For Tomorrow's Environment



Leaders in Containment Technology

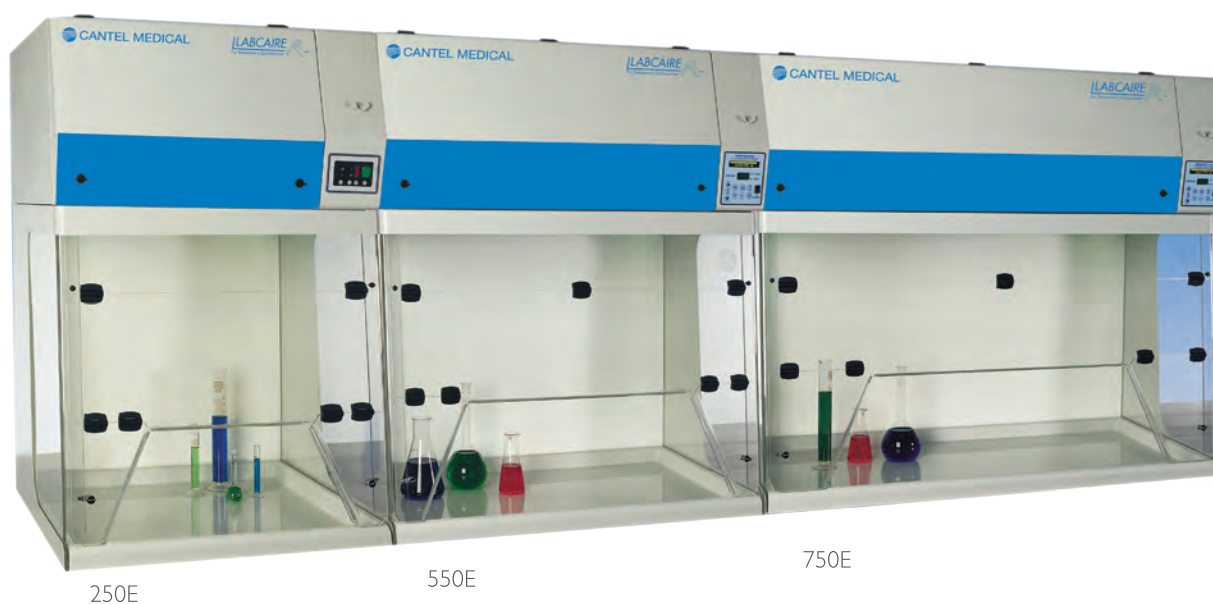
 **CANTEL MEDICAL**

RE-CIRCULATING FUME CUPBOARDS



AURA Re-circulating Fume Cupboards provide full fume and / or particulate containment for operator protection, exceeding safety levels required in the British Standard (BS7989) and fully compliant with COSHH regulations.

No ducting required enabling simple installation, providing an environmentally friendly solution as all exhausted air is captured by the filters resulting in zero emissions to the environment and reduced energy costs.



STANDARD SIZES

| | |
|-----------|-------------|
| AURA 250E | 760mm wide |
| AURA 550E | 1070mm wide |
| AURA 750E | 1360mm wide |
| AURA 751E | 1800mm wide |



STANDARD FEATURES

- Compact and durable design with side glazing
- Multi-hinged front aperture for improved access
- Extra tall fixed height apertures guarantee maximum recommended sash height is not exceeded
- Continuous airflow monitoring and automatic flow adjustment
- Fume monitoring system indicating filter breakthrough, maximising filter usage
- Audible and visual alarms
- Pre-set minimum airflow maintained during lower door opening or flow reduction
- FILTRAK™ Positive Filter Sealing System ensures easy changing of carbon filters
- Pre-filters can be changed from within the cabinet for added safety and convenience
- Extra large fixed height aperture enabling unrestricted access
- Removable deep-lipped (40mm) chemically resistant epoxy coated GRP tray to contain large spills
- 2 x 18 Watt >1000 Lux illumination

FUME MONITORING CONTROL SYSTEM

Standard throughout the range is one of the most advanced monitoring systems available, offering full air-flow monitoring and control. Should the aperture of the cabinet be modified or the pre-filters start to block then the fan speed will increase or decrease accordingly to ensure minimum (0.55 m/sec) face velocity is maintained.

The System employs a three-level toxicity sensor to monitor the exhaust emissions of the carbon filter. Upon detection of chemical breakthrough an audible and visual alarm sounds. The filter type is continuously displayed ensuring the filter is suitable for your application. At the touch of a button the display will give full details of the filter and installation date.



Control Panel



THE BENEFITS OF CARBON FILTRATION

Simple installation, no connection to ductwork is necessary; 1 x 13-amp power socket required permitting flexible siting and allowing easy relocation. The re-circulating technology means no extra ventilation or heating is required, important to controlled environments like Clean Rooms or air-conditioned rooms. This means that the cupboards are exceptionally environmentally friendly compared to ducted systems.

Carbon Filters can be used to remove a majority of chemical fumes; there are 12 types (see figure 1). Main filters can contain up to 4 blends of carbon to allow multi-purpose filtration.



HEPA FILTRATION

Powders / Particulates can be contained using HEPA (High Efficiency Particulate Air) Filters, alternatively a combination of the two can be specified to maximise flexibility of the cabinet.

Each Filter is rated at 99.997% efficient @ 0.3microns and enables the cabinets to produce clean air to levels better than Class 100.

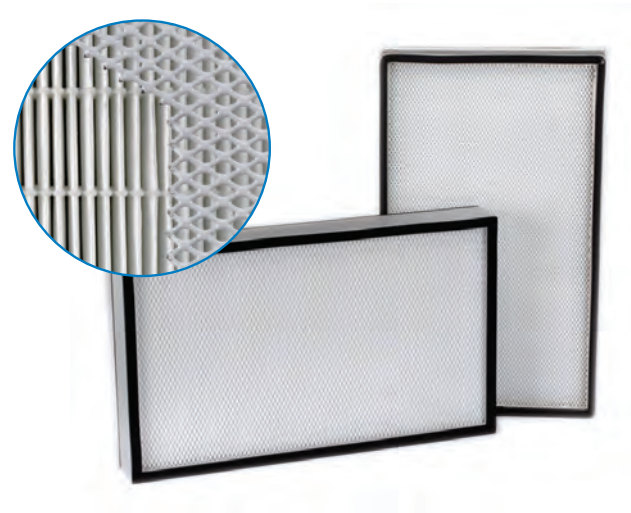


Figure 1

CARBON FILTER TYPES AVAILABLE

| FILTER | | EXAMPLE | |
|--------|--------------------------------|---------|--|
| A/C | Organic / Inorganic Solvents | A/C-Hg | Mercury Vapours |
| ALAC | Human / Animal Odours | ACI | Mineral Acids |
| FORM | Formaldehyde / Glutaraldehyde | CYND | Cyanide Compounds |
| AMN | Ammonia / Amines | ED | Special Blend For Use in Education |
| SUL | Hydrogen Sulphide / Mercaptans | MCH | Custom Filter to Comprise Of Up To 4 Carbons from the List |
| A/C-R | Radioactive Iodine | ETHE | Diethyl Ether |



PRE-FILTER SYSTEM

Pre-Filters are changed without disturbing the carbon filters on the drop down internal tray. This allows changing whilst the fan is running and therefore keeps any dust particles confined to the inside of the cabinet.



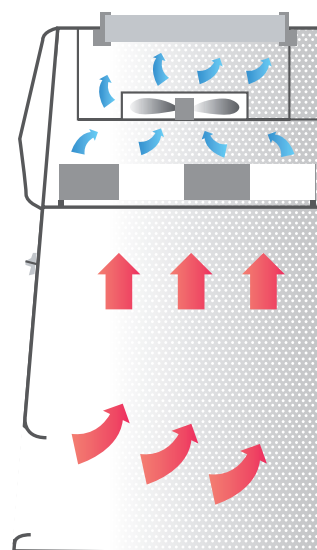
FILTRAK™ FILTER CHANGE SYSTEM

This patented system enables the filters to slide easily in / out on their aluminium rails, by turning the yellow levers the filters will lock down into place and be clamped evenly around all sides. This ensures a tight and regular seal around all edges.

AIRFLOW CHARACTERISTICS

Clean air is drawn in at a speed of 0.55 m/sec into the large front aperture by the fan in the head section. When the air passes through the aperture, it collects any fumes that may be present before pulling them through the pre-filter and then immediately through the main carbon filter.

The air then passes over the three-stage toxicity sensor to measure the quality of exhausted air. Air is exhausted out of the top of the cabinet and back into the room. Should an optional Outlet HEPA or Carbon Safety Filter be fitted, the air will pass through these filters prior to being expelled.



OPTIONAL EXTRAS

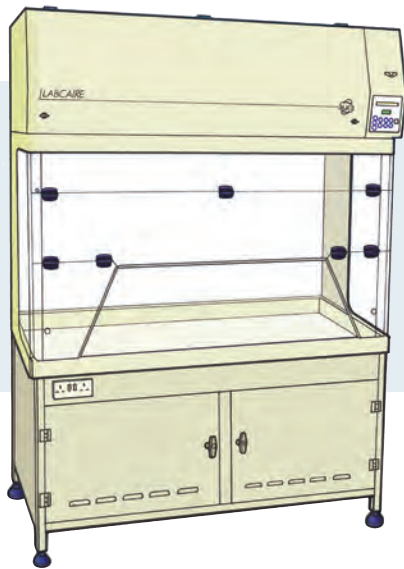
- Outlet Safety Carbon Filter
- Outlet Exhaust HEPA Filter
- Water Taps & Integral Drip Cup
- Gas Taps
- Access Port
- Base Stand
- Mobile Base Stand With Castors
- Ventilated Storage Cupboards
- Custom Work Surface Material i.e. 316-Grade Stainless Steel, Corian, Cast Epoxy Resin & Trespa



Water & Gas Services



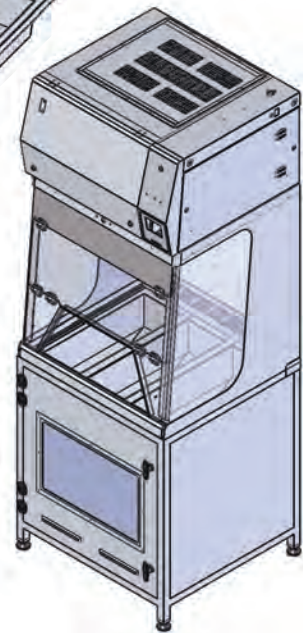
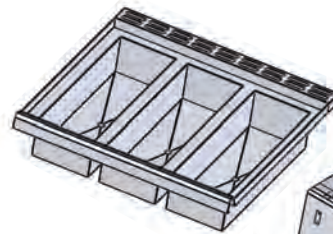
Access Port



Ventilated Storage Cupboards

AREAS OF APPLICATION

- Chemical Handling / Dispensing
- Robotic / Equipment Enclosures
- Powder Weighing Handling



BESPOKE DESIGN SERVICE

Custom made cabinets are available to suit a variety of special applications, our in house dedicated engineering team utilising the latest AutoCAD system, together with our field based Product Specialist who has over 10 years experience working directly with customers ensuring your exact requirements are met.

Cabinets are available in custom dimensions, plus can be fabricated from a variety of materials including stainless and polypropylene. Custom work surfaces are also available and can incorporate bespoke features such as solid granite anti vibration slabs for analytical balances.



| CABINET SPECIFICATION | 250E | 550E | 750E | 751E |
|---|--|---|---|---|
| External Dimensions mm (W x D x H*) | 760 x 710 x 1210 | 1070 x 710 x 1210 | 1370 x 710 x 1210 | 1800 x 710 x 1210 |
| Internal Dimensions mm (W x D x H) | 740 x 700 x 800 | 1050 x 700 x 800 | 1350 x 700 x 800 | 1780 x 700 x 800 |
| Working Aperture mm (W x H) | 480 (Ave) x 240 | 770 (Ave) x 280 | 900 (Ave) x 300 | 900 (Ave) x 300 |
| Airflow | 280 m3/hr | 550 m3/hr | 750 m3/hr | 750 m3/hr |
| Face Velocity (m/sec) | Controlled @ 0.55 | Controlled @ 0.55 | Controlled @ 0.55 | Controlled @ 0.55 |
| Containment To BS7258-14175 | Yes | Yes | Yes | Yes |
| Noise Level - db (A) | <55 | <58 | <58 | <58 |
| Internal Lighting | 2 x 18Watt > 1000 Lux | 2 x 18Watt > 1000 Lux | 2 x 18Watt > 1000 Lux | 2 x 18Watt > 1000 Lux |
| CE Marking | Yes | Yes | Yes | Yes |
| Main Filters - Size mm (W x D x H) | 600 x 340 x 115 | 2 @ 600 x 340 x 115 | 2 @ 600 x 450 x 115 | 2 @ 600 x 450 x 115 |
| Main Filter Weight | 12Kg | 2 x 12Kg | 2 x 16Kg | 2 x 16Kg |
| Pre-Filters - Size mm (W x D) | 600 x 340 | 2 @ 600 x 340 | 2 @ 600 x 450 | 2 @ 600 x 450 |
| Pre-Filter Efficiency | 95% To 0.5µm | 95% To 0.5µm | 95% To 0.5µm | 95% To 0.5µm |
| Optional Safety Filter - Size mm (W x D x H) | 450 x 410 x 50 | 2 @ 450 x 410 x 50 | 2 @ 550 x 450 x 50 | 2 @ 550 x 450 x 50 |
| Optional Safety Filter Weight | 4Kg | 2 x 4Kg | 2 x 5Kg | 2 x 5Kg |
| Optional Outlet HEPA Filter - Size mm (W x D x H) | 450 x 410 x 66 | 820 x 450 x 66 | 1100 x 450 x 66 | 1100 x 450 x 66 |
| Optional Outlet HEPA Filter Efficiency | 99.997% @ 0.3µm | 99.997% @ 0.3µm | 99.997% @ 0.3µm | 99.997% @ 0.3µm |
| Fume Monitoring Control System | Yes | Yes | Yes | Yes |
| Power Supply | 240V 50Hz 380 Watt | 240V 50Hz 720 Watt | 240V 50Hz 820 Watt | 240V 50Hz 820 Watt |
| Construction: Head Section | Zintec Steel Epoxy Powder Coated For Corrosion Protection | | | |
| Construction: Base Section | Zintec Steel Epoxy Powder Coated, Clear Acrylic Front & Side Glazing, Opaque Back Panel (Clear Available On Request), Moulded Chemically Resistant Fibre glass Tray. | | | |
| Fan | Centrifugal High Performance To IP 44 | 2 x Centrifugal High Performance To IP 44 | 2 x Centrifugal High Performance To IP 44 | 2 x Centrifugal High Performance To IP 44 |
| Weight* | 95Kg | 125Kg | 155Kg | 200Kg |

* Excluding Outlet Safety or Outlet HEPA Filters



CHEMICAL DISPENSING STATION



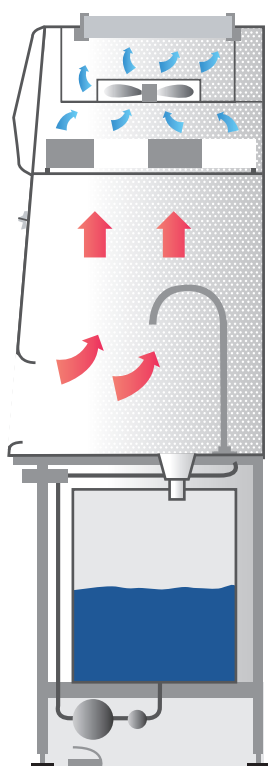
The Labcaire Chemical Dispensing Station has been designed to offer a complete solution to all problems associated with the dispensing of Formalin. It is equally at home in either the Operating Theatre or Pathology Laboratory where Formalin is regularly distributed. The compact footprint of the cabinet measures less than 800mm² allowing siting of the cabinet in almost any situation.

Based on the successful AURA range of Fume Cupboards, fume containment is guaranteed, by utilising a large capacity chemically impregnated FORMALDEHYDE (FORM) specific filter. This neatly encloses all operating functions of the CDS, including filling, storage and dispensing of Formalin liquid, operators never need to come into direct contact whilst dispensing Formalin.

The work surface is constructed of stainless steel with a tail lipped edge to all sides, therefore containing any accidental spillages.



250E CDS



LARGE CAPACITY

Underneath the work surface is a 50-litre storage container in which the Formalin is stored. When required, the footswitch is depressed and Formalin is then automatically pumped via the tap on the work surface. Use of the footswitch enables both hands to be kept free to ensure even greater safety and control.

When filling large containers the flow from the tap can be increased by adjusting the flow control setting dial to facilitate faster dispensing, normal flow is very gentle allowing safe and splash free filling of smaller vessels.



| CABINET SPECIFICATION | 250E CDS |
|-------------------------------|-------------------|
| Dimensions mm (W x D x H) | 765 x 710 x 2100 |
| Carbon Filter Weight | 12Kg |
| Carbon Filter Type | FORM |
| Pre-Filter | 95% Eff. @ 0.5µm |
| Noise Level | <58db (A) |
| CE Marking | Yes |
| COSHH Compliance | Yes |
| External Ventilation Required | None |
| Airflow | 250m³ / Hour |
| Low Airflow Alarm | Yes |
| Carbon Filter Monitor / Alarm | Yes |
| Energy Consumption | 500 Watts |
| Power Requirements | 230 Volts AC 50Hz |
| Internal Lighting | Yes |
| Weight (Kg) | 130 |

OPTIONS AVAILABLE

- Small Sink & Cold Water Tap (Connection to mains drainage required)
- Exhaust HEPA Filter
- Outlet Safety Carbon Filter

AREAS OF APPLICATION

- Chemical Handling / Dispensing
- Formalin Dispensing for Operating Theatres / Pathology Laboratories
- Chemical Waste Collection Station



F100 FUME CUPBOARD



FUME / PARTICULATE CONTAINMENT / WEIGHSTATION CABINET

The compact F100 has been designed specifically for use as an enclosure for powders and particulates handled during weighing.

| CABINET SPECIFICATION | F100 |
|---------------------------------------|--|
| External Dimensions mm (W x D x H) | 620 x 510 x 960 |
| Internal Dimensions mm (W x D x H) | 608 x 498 x 610 |
| Airflow / Face Velocity | >0.6m/sec |
| Controls | On/Off Switch, Low Airflow Alarm |
| Electrical | 240v / 50Hz |
| Fan / Motor | Centrifugal Fan, Brushless & Sparkless To IP44 |
| Weight (Kg) | 40 |



FEATURES & BENEFITS

The small footprint of the cabinet makes installation easy especially as the unit requires no connection to duct work.

The unit can be fitted with two High Efficiency Fine Dust (HEFD) Filters rated to EU9 Grade and electrostatically charged pre-filters. These filters ensure that particulate matter (0.5micron) is filtered out before returning the cleaned air back into the Laboratory.

The low-airflow alarm continuously monitors containment conditions and alerts the user to pre-filter or Main HEFD filter blockage to ensure 100% containment at all times.

The head section of the cabinet is constructed from Zintec Powder Coated Mild Steel for strength whilst the base section has clear 6mm acrylic glazing to all sides. The cabinet can also be fitted with fluorescent light for maximum illumination of the working area. The base of the cabinet is left open to allow the balance to sit directly on the work surface to minimise vibrations. If required, the cabinet can be supplied with two impregnated carbon filters instead of HEFD filters to allow its use with light chemical applications.

OPTIONS AVAILABLE:

- Light Box
- Spillage Tray
- Base Stand



DUCTED FUME CUPBOARDS (DFC Range)



Glass lined interior

The CANTEL MEDICAL range of ducted Fume Cupboards comply with the requirements and recommendations of BS EN 14175 and are designed for use in Pharmaceutical, University, Hospital and Industrial laboratories.

The units are available in a range of standard widths - 1000mm, 1200mm, 1500mm, 1800mm and 2000mm. CANTEL MEDICAL are specialists in manufacturing Bespoke Fume Cupboards to customised dimensions and specifications.



Stainless Steel interior with scaffolding



Walk in Fume Cupboard



FEATURES

Attractive design, with an aerodynamic zintec mild steel outer carcass and an epoxy polyester powder coated gloss finish. Stainless steel front cill – hinged option available.

Air by-pass via perforated top panels or louvered aluminium grilles available.

Infill panelling by extended continuous side panels can be provided with front panel supported on gas struts for easy access for maintenance.

Internal chamber and baffles constructed from Trespa as standard, with options for PVC, polypropylene, 316 grade stainless steel, toughened glass or cast epoxy resin.

Smooth toughened glass vertical sliding sash with failsafe mechanism on single weight system – sashes can be combination style with horizontal sliding windows.



Stainless steel drip cup sink



TEL AFA 1000
Airflow controller

Worktops manufactured from cast epoxy resin and dished – options for Ceramic, Trespa, PVC, polypropylene and 316 grade stainless steel available.

Range of wet and dry services plumbed in rigid copper or flexible pipework.

Range of polypropylene, cast epoxy and stainless steel drip cups, sinks and vulcathene bottle traps.

Range of switch socket outlets, RCD protection, data outlets, etc, available.

Twin fluorescent light fittings and light switches fitted as standard.

Programmable control panels to meet BS 7258 fitted as standard incorporating sash high alarms, low airflow alarms and fan stop/start facility.

Ventilated storage cupboards – suitable for acids, solvents or flammables, can be fire rated to 60 or 90 minutes (ASECOS)

PVC ductwork connection pieces fitted as standard.

Adaptable for use as on a constant air volume or variable air volume extract system.

Scaffold bosses and framework can be fitted.

Pass through ports between inner and outer skins can be provided.

Fire suppression systems can be provided.

Tissue guards to back baffles can be provided.

Internal chambers can be manufactured from fully welded 316 grade stainless steel to provide a seamless monolithic chamber suitable for radioactive use.



Fire trace fire suppression system
after powder activation



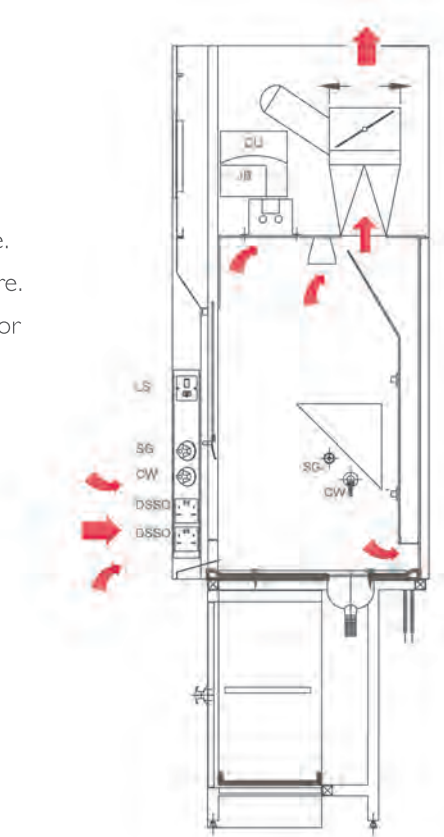
Stainless steel work surface scaffold
system and optional gas services

| CABINET SPECIFICATION | DFC 1000 | DFC 1200 | DFC 1500 | DFC 1800 | DFC 2000 |
|-------------------------------------|--|-------------------|-------------------|-------------------|-------------------|
| External Dimensions mm (W x D x H*) | 1000 x 900 x 2375 | 1200 x 900 x 2375 | 1500 x 900 x 2375 | 1800 x 900 x 2375 | 2000 x 900 x 2375 |
| Internal Dimensions mm (W x D x H) | 700 x 630 x 1200 | 900 x 630 x 1200 | 1200 x 630 x 1200 | 1500 x 630 x 1200 | 1700 x 630 x 1200 |
| Working Aperture mm (W x H) | 700 x 500 | 900 x 500 | 1200 x 500 | 1500 x 500 | 1700 x 500 |
| Airflow | 690m³/hr | 810m³/hr | 1080m³/hr | 1350m³/hr | 1530m³/hr |
| Face Velocity (m/sec) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Containment To BS7258 & BS EN 14175 | Yes | Yes | Yes | Yes | Yes |
| Internal Lighting | Min 500 Lux | Min 500 Lux | Min 500 Lux | Min 500 Lux | Min 500 Lux |
| CE Marking | Yes | Yes | Yes | Yes | Yes |
| Control System | TEL AFA1000 | TEL AFA1000 | TEL AFA1000 | TEL AFA1000 | TEL AFA1000 |
| Power Supply | 240V / 50Hz | 240V / 50Hz | 240V / 50Hz | 240V / 50Hz | 240V / 50Hz |
| Construction: Materials | Zintec Steel Epoxy Polyester Powder Coated Carcass | | | | |
| Weight* | 120Kg | 150Kg | 180Kg | 210Kg | 240Kg |

AIRFLOW CHARACTERISTICS

Air is drawn over the work surface and through openings in the rear baffle. This baffle ensures an even collection of air throughout the entire enclosure. Chemically contaminated air is then exhausted via “fish tail” into the duct for extraction to atmosphere.

Should airflow drop below the recommended levels, a low-airflow alarm will activate. When ventilated chemical storage cabinets are selected as an option these are connected internally to the rear baffle / plenum.



FUME EXTRACT SYSTEMS

CANTEL MEDICAL are able to design and install fume extraction systems serving our fume cupboards and ventilated enclosures to ensure that all our installations perform efficiently, safely and with minimum noise levels. All PVC ductwork is fabricated in accordance with DW 154 and installations comply with the recommendation of BS EN 14175.

A range of centrifugal and direct driven fan units are available, which are fabricated from polypropylene. The fan motors used are available in either single or three phase and can be single speed, two speed or inverter driven.



Turn key ducted installation



2 metre ducted units with under cupboards

CANTEL MEDICAL are able to undertake a full turn-key installation, including the supply and installation of all electrical equipment to control and operate the extract systems, e.g. isolators, fans, starters, interconnecting wiring, etc.

Where materials used are required by the client to be fire retardant, we can design and install systems from either fire retardant polypropylene or from PVC with a glass reinforced plastic outer coating. Special items, such as fire dampers, intumescent fire collars, attenuators, HEPA filter housings, etc, are also available.





Made in UK

CANTEL Medical now offers a 5-Year limited parts and labour warranty (extendable to 7-years) on all Labcaire Clean-Air Equipment, providing commissioning and annual servicing is carried out by a CANTEL engineer; see our terms and conditions for full details.



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