

Laboratory Fume Cabinets and Workstations

Brochure (excerpt)



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Laboratory Fume Cabinets - ductless with recirculatory filtration -

Bigneat is an established world-leading innovator of high-performance ductless laboratory safety solutions including fume hoods for handling chemicals, such as Chemcap Clearview™ cabinets, Chemcap Pro2 and Chemical Dispensing Stations. These cabinets have been designed with significant improvements over previous models, which ensure they operate to the highest industry standards and provide the user with a clear view into the cabinet. Chemcap™ hoods are ductless with recirculatory filtration, they incorporate efficient Chemcap™ carbon filters for fume removal. The Chemcap™ cabinets can also be equipped with an additional HEPA filter eliminating particles greater than 0.3 µm with an efficiency of 99.997 % as defined in EN 1822.



- A safe working environment for protection from chemicals, vapours and aerosols in laboratories.
- User-friendly keyboard control panel with LCD display
- Unlike conventional fume cabinets which vent directly into the atmosphere, these filtration based systems completely eliminate the release of hazardous compounds into the environment.
- Can be moved easily to wherever laboratory procedures are to be undertaken. Less walking – less risk.
- Eliminates the release of hazardous emissions into the environment
- Quiet operation (Noise level < 50 dBA)
- Low power consumption
- Audible electronic low airflow alarm
- Clearview all-round vision
- Supplied complete with pre-filter, carbon filter of pre-determined type, and a HEPA filter is available on request
- Easy cleaning – all materials are chemically resistant
- Energy efficient lighting, 18 watt
- Hinged and lockable front access windows
- The enclosure is frameless and manufactured from optically clear fire-retardant acrylic which is UV stable, chemically resistant and easy to clean.

Chemcap™ Filtration Technology

Carbon filtration for chemicals and vapours

Highly efficient Chemcap™ filters eliminate toxic substances and compounds within the recommended occupational exposure limit for pollutant gases having a molecular weight equal to or greater than 30. Filtration efficiency of 99.9 %, meets BS 7989:2001 Standard for the duration of the filter life and without deterioration in filter performance. Laboratory grade carbon filter media is impregnated with additives to ensure the best possible retention capacities and filtration performance.

Bigneat was one of the first companies to replace potentially toxic and carcinogenic inorganic additives with environmentally friendly and biodegradable compounds.

Filtration for aerosols and particulates

Pre-filters stop larger particles and are installed in all Chemcap™ Clearview cabinets. HEPA filtration is fitted as an option when aerosols and small particles require removal. This can be upgraded to ULPA filtration when nanoparticle removal is required. Pre-filtration eliminates particles at 5.0 µm or larger to an efficiency of 92 % as defined in BS EN ISO 779.

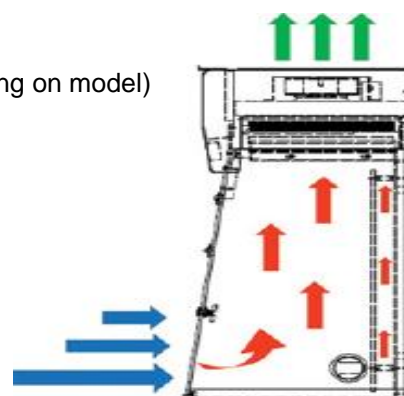
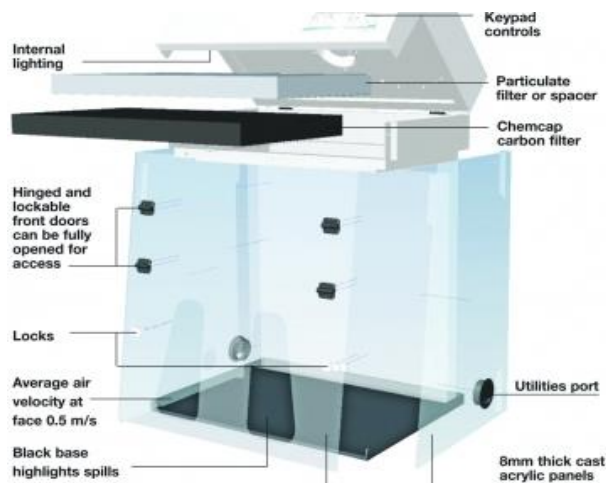
The choice of the appropriate Chemcap™ filter depends on the specific requirements of the user (see table on page 7).

True Safechange Technology

Cabinet incorporates a 'True Safechange' mechanism that enables the safe removal of HEPA particulate filters. Replacement is performed under negative pressure with the cabinet running. This is an alternative to a bag-in/bag-out system.

Chemcap Clearview™ cabinets

- Operate with excellent airflow control
- Highly efficient carbon filtration
- Energy efficient and easy to use
- Supplied with pre-filter(s) (quantity depending on model)
- Main and HEPA filter(s) to be selected individually (quantity depending on model)
- Supplied with lighting, 18 watt fluorescent lamps
- Optional accessories available (please see page 4)



- Laboratory air enters the cabinet past the user
- Airborne contaminations drawn away and into the filters
- Clean air is returned to the laboratory

Technical specifications	BC 4002	BC 6003	BC 8004	BC 1004	BC 1204	BC 1206	BC 1506
External dimensions w x d x h [mm]	410 x 540 x 900	600 x 570 x 1145	800 x 570 x 1145	1000 x 570 x 1145	1200 x 570 x 1145	1200 x 570 x 1145	1500 x 570 x 1145
Internal dimensions w x d x h [mm]	380 x 495 x 580	570 x 520 x 810	770 x 520 x 810	970 x 520 x 810	1170 x 520 x 810	1170 x 520 x 810	1470 x 520 x 810
Access Style	Flap	Teardrop	Teardrop	Teardrop	Teardrop	Trapezium	Trapezium
Face Velocity	0.5 m/s	0.5 m/s	0.5 m/s	0.5 m/s	0.5 m/s	0.5 m/s	0.5 m/s
Noise level	< 50 dBA	< 50 dBA	< 50 dBA	< 50 dBA	< 50 dBA	< 55 dBA	< 55 dBA
Pre-filter	1	1	1	1	1	2	2
Main/charcoal filter	1	1	1	1	1	2	2
HEPA filter possible (on request)	1	1	1	1	1	2	2

→ Prices on request

Also in our portfolio
- detailed information and prices on request.



Education Fume Cabinet



Clean Air Enclosure

Bespoke and custom finished cabinets that suit your robotics system and the contained process.



Safety Cabinet Mini II MSC

A small width safety cabinet ideal for the energy conscious, space-limited laboratory - providing both operator and process protection.

Chemcap Pro2 Ductless Fume Cabinets

These cabinets provide increased operator safety over the Chemcap Clearview™ cabinet design, achieved through double carbon filtration and a powerful extraction system. (2 models with double fan!).



Technical specifications	PRO2 1004	PRO2 1506	PRO2 2008
External dimensions w x d x h [mm]	1048 x 580 x 1248	1548 x 580 x 1248	2048 x 580 x 1248
Internal dimensions w x d x h [mm]	968 x 506 x 807	1468 x 506 x 807	1968 x 506 x 807
Access Style	Trapezium 700 x 285 mm	Trapezium 1200 x 285 mm	Trapezium 700 x 2 x 285 mm
Face Velocity	0.5 m/s	0.5 m/s	0.5 m/s
Noise level	< 50 dBA	< 55 dBA	< 55 dBA
Pre-filter	1	2	2
Main/charcoal filter	2	4	4
HEPA filter possible (on request)	1	2	2
Fan	1	2	2

→ Prices on request

Cat. No. Description

Optional Accessories for Chemcap™ Cabinets

AB0002/02	MTC 600, static bench with levelling/height adjustable feet for BC 6003
AT0002/02	MTC 600, mobile bench with lockable castors for BC 6003
AB0003/02	MTC 800, static bench with levelling/height adjustable feet for BC 8004
AT0003/02	MTC 800, mobile bench with lockable castors for BC 8004
AB0004/02	MTC 1000, static bench with levelling/height adjustable feet for BC 1004
AT0004/02	MTC 1000, mobile bench with lockable castors for BC 1004
AB0005/02	MTC 1200, static bench with levelling/height adjustable feet for BC 1206
AT0005/02	MTC 1200, mobile bench with lockable castors for BC 1206
AB0006/02	MTC 1500, static bench with levelling/height adjustable feet for BC 1506
AT0006/02	MTC 1500, mobile bench with lockable castors for BC 1506
AB0014/02A	MTC 1000, static bench with levelling/height adjustable feet for PRO2 1004
AT0014/02A	MTC 1000, mobile bench with lockable castors for PRO2 1004
AB0015/02A	MTC 1500, static bench with levelling/height adjustable feet for PRO2 1506
AT0015/02A	MTC 1500, mobile bench with lockable castors for PRO2 1506
AB0016/02A	MTC 2000, static bench with levelling/height adjustable feet for PRO2 2008
AT0016/02A	MTC 2000, mobile bench with lockable castors for PRO2 2008

MT Mobile Bench: open box section construction, epoxy coated, with foot rest bar, with lockable castors or height adjustable legs, choice of width according to chosen cabinet.

Further accessories on request, such as **SK - Services Kit:** mobile bench or stand with swan neck water tap with drip cup, gas tap and electrical socket.

Powder Handling / Weighing Stations

for protecting the operator from hazardous airborne particulates and powders

Bigneat powder cabinets offer the operator excellent protection as well as easy and safe working. All powder cabinets have a pre-filter (eliminates particles of 5.0 µm or larger to an efficiency of 92 %) and a HEPA filter (H14) that eliminates any particles > 0.3 µm with an efficiency of 99.995 %. ULPA (U16 Standard) is available as optional upgrade (on certain models) and has an efficiency of 99.999 % for particle sizes of 0.1 – 0.3 µm MPPS as defined in EN 1822.



F3-XIT Weighing Station

- Very small footprint and excellent all-round vision
- Compact size and easy to use
- Quiet operation
- Fan is pre-set between 0.3 and 0.5 m/s depending on application
- Equipped with pre-filter and HEPA filter (H14)
- Lockable services access port in rear panel

F3-XIT-S

Cat. No.	Internal dimensions w x d x h (mm)	External dimensions w x d x h (mm)
F3 XIT-S	415 x 575 x 455	440 x 600 x 650
F3 XIT-D	579 x 506 x 455	600 x 520 x 650
Optional:		
BS5701/06A	PVC Base Tray (XIT-S)	440 mm wide
BS5700/06B	PVC Base Tray (XIT-D)	600 mm wide
BS5700/06/01	HPL Base Tray (XIT-D)	600 mm wide



XIT Plus Weighing Station

- Suited for weighing with an Analytical Balance to 4 decimal places^{*)}
 - Equipped with Safechange pre-filter and HEPA filter (H14)
 - Fan is pre-set between 0.3 and 0.5 m/s depending on application
 - Audible electronic low airflow alarm
 - Services access port in each side panel
 - Lockable front access doors
 - Keypad control panel and service due indicator
- ^{*)} When used on a suitable work surface.

XIT Plus on optional stand

Cat. No.	Internal dimensions w x d x h (mm)	External dimensions w x d x h (mm)
XIT Plus 804	770 x 510 x 810	820 x 570 x 1145
XIT Plus 1004	970 x 510 x 810	1020 x 570 x 1145
XIT Plus 1204	1170 x 510 x 810	1220 x 570 x 1145
XIT Plus 1504	1470 x 510 x 810	1520 x 570 x 1145
Optional:		
Audible electronic low airflow alarm.		
Different stands: open box section construction, epoxy coated, with foot rest bar.		
Static or with levelling/height adjustable feet for all models.		

Also available in our portfolio:



Ventilated Chemical Storage
with Chemcap™ Filter system
to eliminate airborne risks and to
purify laboratory air.



UV PCR Workstations
ideal for protecting PCR
procedures from contamination.

Excel and Excel Plus Safechange Weighing Stations

These cabinets – with horizontal air flow - are used for the most demanding powder handling applications, such as high accuracy weighing or dispensing of potentially toxic powdered substances. The Safechange technology in the Excel Plus range has been designed to provide maximum safety for users and maintenance staff when exchanging filter under negative pressure.



Excel Plus Safechange Cabinet

- “True Safechange” mechanism: safe removal of HEPA filters under negative pressure with the cabinet running
- Supplied with double HEPA filters
- 175 mm height front access across full cabinet width
- Suited to weighing with a micro balance to 6 decimal places
- Includes: audible electronic low airflow alarm, black HPL work surface and hour counter

Optional (prices on request):

- Ionising bars
- LED - low energy lighting
- A static, open-frame, supporting bench with foot rest bar

Excel Plus Safechange

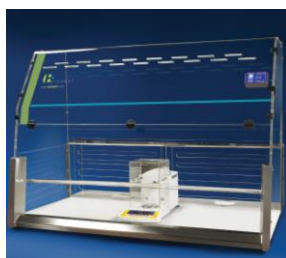
Cat. No.	Internal dimensions w x d x h (mm)	External dimensions w x d x h (mm)
Excel Plus 1006	1000 x 600 x 669	1020 x 812 x 1065
Excel Plus 1306	1275 x 600 x 502	1295 x 812 x 898
Excel Plus 1606	1575 x 600 x 502	1595 x 812 x 898



Excel Plus Cabinets – Recirculating or ducted (with exhaust air system)

- Air purification through integrated filters (recirculating) or existing exhaust air systems (ducted)
- Supplied with pre-filter and HEPA filter (recirculating)
- Incorporates aerofoil technology and graded rear back baffle to ensure reduced turbulence and precise control of horizontal air flow across the entire width of the working access.
- Keypad control panel with touch button controls and service due indicator
- Fan is pre-set between 0.3 and 0.5 m/s depending on the application (recirculatory models only)

Excel Plus Recirculating



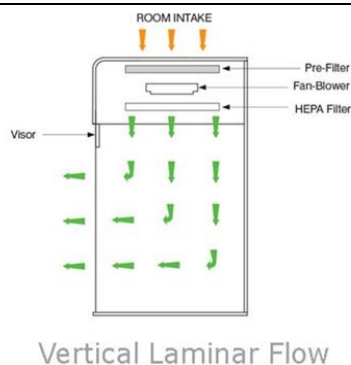
Excel Plus Ducted

Optional (prices on request):

- LED - low energy lighting
- Hour Counter
- Carbon filtration for chemical fumes (see page 7)
- Ionising bars
- Support stand (different versions)
- Spigot (200 mm) for connection to house ducting (ducted models only)

Cat. No.	Internal dimensions w x d x h (mm)	External dimensions w x d x h (mm)
Excel Plus Recirculating		
Excel Plus 804	770 x 605 x 790	820 x 725 x 1167
Excel Plus 1004	970 x 605 x 790	1020 x 725 x 1167
Excel Plus 1206	1170 x 605 x 790	1220 x 725 x 1167
Excel Plus 1506	1470 x 605 x 790	1520 x 725 x 1167
Excel Plus Ducted		
Excel Plus 800	772 x 605 x 885	800 x 740 x 912
Excel Plus 1000	972 x 605 x 885	1000 x 740 x 912
Excel Plus 1200	1172 x 605 x 885	1200 x 740 x 912
Excel Plus 1500	1472 x 605 x 885	1500 x 740 x 912

Vertical Laminar Flow (VLF) Cabinets



- VLF cabinets are available in 3 different widths: 1 m, 1.5 m, 2 m
- With all-round view into the work area
- Can be positioned on an existing bench or can be supplied as a free standing system on a supporting mobile bench or static stand
- Noise level < 65 dBA
- Pre-filter eliminates particles > 5.0 μm or larger to an efficiency of 92 %
- HEPA filter (H14) eliminate any particles > 0.3 μm with an efficiency of 99.995 %, and provide an ultra-pure, particle-free environment
- Comfortable to use and easy to maintain

Cat. No.	Internal dimensions w x d x h (mm)	External dimensions w x d x h (mm)
VLF 1000	966 x 700 x 700	1000 x 725 x 1040
VLF 1500	1466 x 700 x 700	1500 x 725 x 1040
VLF 2000	1966 x 700 x 700	2000 x 725 x 1040

Optional accessories available on request – such as epoxy powder coated bench for cabinet, open box-section framework with levelling/adjustable feet, taps for air, gas, and vacuum, electrical plug socket, service port (\varnothing 80 mm) in each side panel, fluorescent tube lighting and ultraviolet sterilisation lamp with timer.

Details on further laminar flow cabinets (horizontal laminar flow, operator protection workstation) and biological safety cabinets – class II on request.

Filter Types and filter selection			
Filters OS and H+ are suitable for most organic vapours and acid handlings. However, we recommend when:		Filter Type 2-stage without particulates	Filter Type 3-stage for chemicals with particulates (HEPA)
Organic compounds (secondary acids)	→	Filter OS	Filter OS HP
Acid compounds (secondary organic vapours)	→	Filter H ⁺	Filter H ⁺ HP
Formaldehyde predominates	→	Filter F	Filter F HP
Ammonia predominates	→	Filter AM	Filter AM HP
Radioactive particles are present	→		Filter Ri HP
Mercury is present	→		Filter Hg HP
Uses are varied Multipurpose (Universal)	→	Filter MP	Filter MP HP

Asbestos Inspection Cabinets

A HEPA filtered ductless safety cabinet which provides operator protection from fibres and particles. The Asbestos Inspection Cabinets have excellent access through tear drop shaped openings in the front panel to the cabinet interior for manipulation of the contained microscope and sample slides. In addition, the lower panel has an aperture to accept a microscope eye piece. This will be cut to suit individual customer's requirements prior to delivery. Cabinet may be placed onto an existing work surface or supplied with its own support stand or mobile bench.



Asbestos Inspection Cabinets

- Available in two sizes
- Supplied with pre-filter and HEPA filter
- Ductless safety cabinet
- Transparent acrylic enclosure (UV stable and chemical resistant) offers perfect view of interior
- Quiet operation (< 50 dBA)
- Lockable front access panels for arms and microscope eye piece (Teardrop Trapezium), service port with cover is provided in each side panel
- Audible electronic low air flow alarm
- Meets recognised standards worldwide, such as:
- HSG 248; BS EN 14175-2:2003; BS EN 61326:2006

Cat. No.	Internal dimensions w x d x h (mm)	External dimensions w x d x h (mm)
BA8004/11A	770 x 510 x 810	820 x 570 x 1145
BA1004/11A	970 x 510 x 810	1020 x 570 x 1145

Cleantec® LEV Dust and Fume Extraction System



Cleantec® LEV

- Cleantec systems enhance productivity in the laboratory and workplace by efficiently removing dusts and odours directly from the source
- Lightweight moulded ABS case ensures high resistance to chemicals
- Various HEPA, carbon or combination filter are available
- Easily changed pre-filters give extended HEPA filter life
- Portable and adaptable to customers' changing process requirements
- Standard electrical socket connection for extraction fan supply

Optional:

- Arm Kit 1: 1 x flexible arm Ø 32 mm x 1000 mm reach with bench clamp, connection hose and hose clips as well as the option for a clear dome hood
- Arm Kit 2: same as arm Kit 1, but with 2 x flexible arms and 2 x dome hoods

Cat. No.	Dimensions w x d x h (mm)	Weight
CT0200/01	390 x 375 x 490	18 kg