

# Ductless Fume Cabinets & Hoods

CHEMCAP  
PRO2™

Provides the highest possible level of containment & operator safety in a ductless fume cabinet



PR 1506 with optional configurable control system

Double protection, double safe  
Operator protection from the most toxic fumes, vapours and particulates  
For high volume usage

BIGNEAT CONTAINMENT TECHNOLOGY

Value. Service. Experience.

Tel: +44 (0)23 92 266400 · E-mail: info@bigneur.com



## New generation

Bigneat is a leading manufacturer of laboratory safety enclosures. In the past decade Chemcap Ductless Fume Cabinets, which operate with excellent airflow control and with high efficiency carbon filtration, have been sold to over 28 countries around the world.



manufacturing enclosures in the UK since 1972

Chemcap Clearview cabinets are launched with significant design improvements which ensure they operate to the highest industry standards and provide the user with improved all-round clearview vision.

Chemcap Pro2 completes the range providing increased operator protection with incorporation of a back-up filter.

## Initiator of change

### Leader in carbon filtration

**technology:** High 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 whilst maintaining excellent performance.

### Always make sure your cabinet is fitted with a Chemcap filter

Bigneat's carbon media have excellent retention capacities which are amongst the best in the world. Our programme of research and development continues to improve filter performance.

### Our promise:

Bigneat is committed to your safety and will advise on the suitability of ductless fume cabinets for your applications. We will suggest good working practices and how best to maintain the safety and wellbeing of your staff using our cabinets.

Chemcap Pro2 – the effective way to eliminate airborne risks and to purify laboratory air

## Back up filter system gives increased operator and environmental protection

**Chemcap Pro2 Ductless Fume Cabinets provide increased operator safety over the Chemcap Clearview cabinet design, achieved by double carbon filtration and powerful extraction system.**

With its safe-change pre-filter system and optional HEPA filters, Chemcap Pro2 is engineered for use with most toxic fumes, vapours and particulates.

When the lower filter reaches saturation point, any fumes breaking through are retained by the upper back-up filter. Each filter stack incorporates an inter-filter sampling port to monitor the primary filter status.

During service the primary filter is removed and the back up filter is dropped down and a new back up added to the stack.

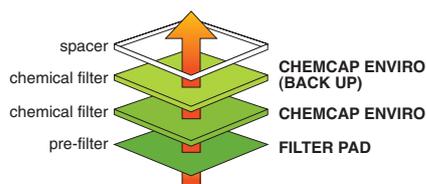
## Key features

- The 'Clearview' enclosure design, trapezium front access and integral lighting, provides excellent all-round vision and operating comfort.
- Keypad control panel with touch button controls and service due indicator.
- The integrated lamp is mounted within the fan housing, not within airflow no risk to cabinet integrity or operator during lamp change (average 312 lx).
- Installation using the PVC base containment tray for existing work surfaces is easy.
- Mobile bench units with large lockable castors provide great flexibility.

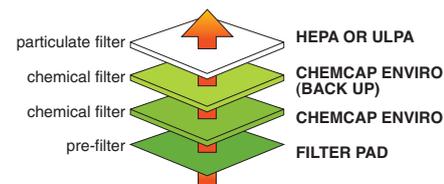
## Three-stage filtration or four-stage filtration is used in Chemcap Pro2

Chemcap Pro2 cabinets have a minimum 3-stage filtration stack or optional 4- stage, when HEPA filtration is incorporated.

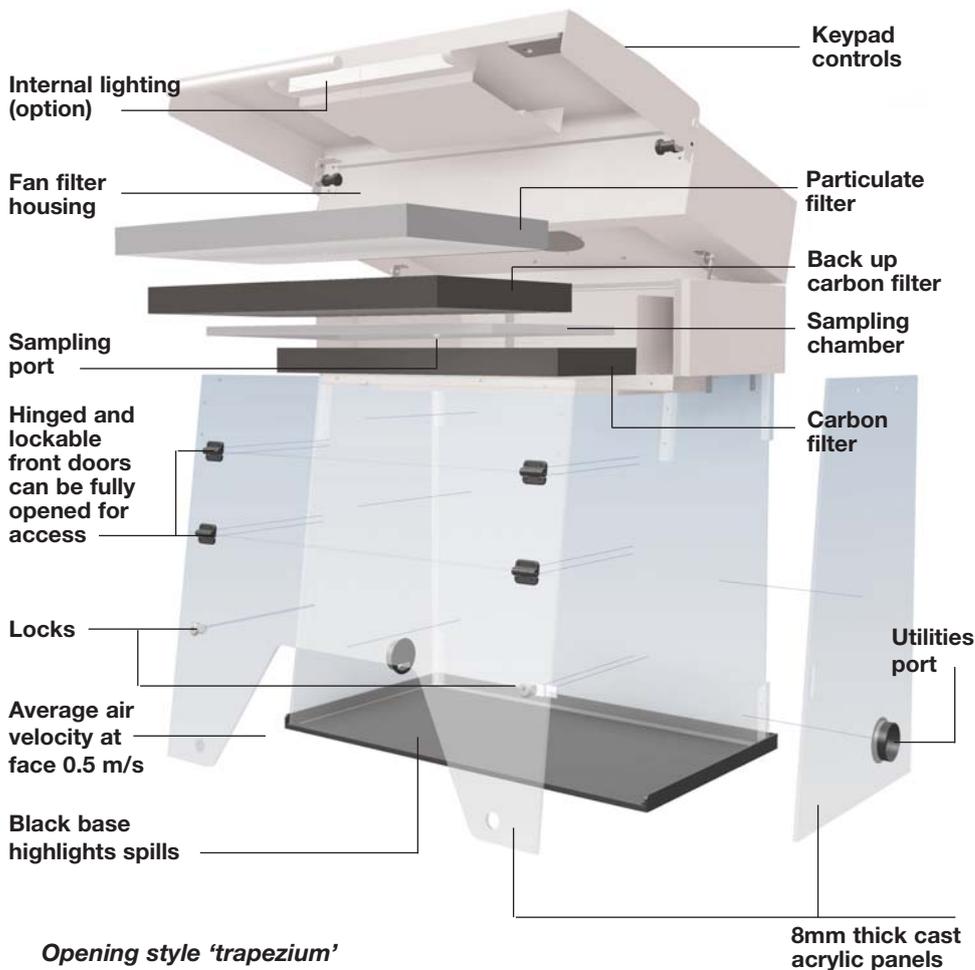
### 3-stage filtration



### 4-stage filtration



# Chemcap Pro2



Keypad control panel fitted to standard model

## More Features

- Audible electronic low air flow alarm
- Rear baffle ensures even air flow throughout the cabinet
- Quiet operation
- Pre-filter can be bagged under negative pressure
- Easy clean – all materials chemically resistant
- Lockable front access windows

## Optional extras

- EC** – Configurable control system; fan speed compensation, flow rate indication, hour counter, visible and audible alarm
- FSA** – Electronic filter saturation alarm
- WP** – Replacement of rear window with opaque white panel
- FHP** – Heat protection shield for filters
- SK** – Services Kit - see mobile bench for details

## Description and Technical Information

Model	Description	Dimensions mm (external wxdxh)	Dimensions mm (internal wxdxh)	Access Style	Face Velocity	Power Consumption	Sound Level dBA	Boxed Weight kg	Boxed mm Dimensions (wxdxh)
PR 1004	<b>Chemcap Pro2 Ductless Fume Cabinet</b> supplied complete with pre-filter, x2 carbon filters (F4) of pre-determined type and HEPA filter (Single filter stack).	1048 x 580 x 1248	968 x 506 x 807	Trapezium 700x285mm	0.5 m/s	150W*	<50	147	1140 x 1010 x 790
PR 1506	Supplied complete with x2 pre-filters, x4 carbon filters (F3) of pre-determined type and 2x HEPA filters (Double filter stack, double fan system).	1548 x 580 x 1248	1468 x 506 x 807	Trapezium 1200x285mm	0.5 m/s	285W*	<55	215	1640 x 1010 x 790
PR 2008	Supplied complete with x2 pre-filters, x4 carbon filters (F4) of pre-determined type and 2x HEPA filters (Double filter stack, double fan system).	2048 x 580 x 1248	1968 x 506 x 807	Trapezium 700x2x285mm	0.5 m/s	285W*	<55	280	2140 x 1010 x 790

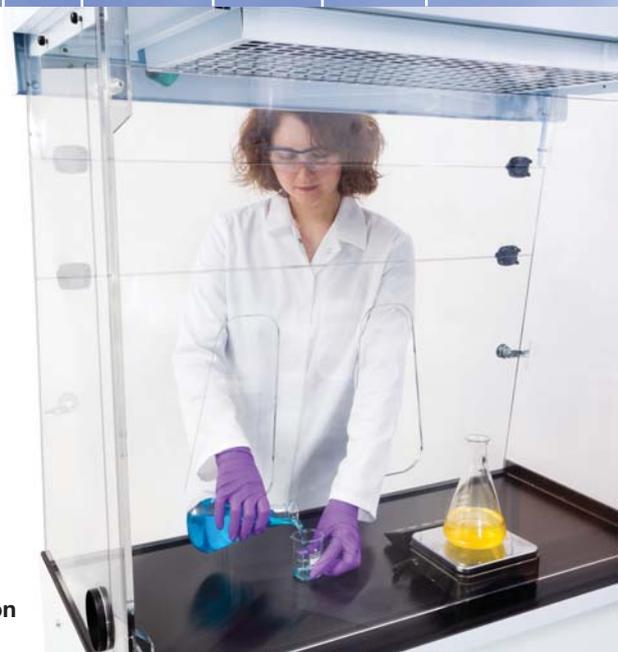
Cabinets available for power supply: 230V, AC, 50Hz, 5Amp, 1Ø and 110V, AC, 60Hz, 8Amp, 1Ø. Alternative front apertures can be requested or specially engineered for access to contained equipment such as a microscope.

\* Power is shown with fan operating only.

## Standards for filtration and containment

Chemcap Clearview cabinets meet the requirements of all major and recognised Standards worldwide for containment and filtration, for example:

- US Standard ASHRAE 110: 1995 12-203 (for containment)
- British Standard BS 7989:2001 (for filter efficiency and retention capacity)
- French Standard AFNOR NFX 15-211:2009 - Class 1 (for filter retention capacity)
- Canadian Standard CSA Z316.5 (for containment)



Clear all-round vision

# Protect your laboratory staff and improve the laboratory environment

When you want to contain and remove hazardous fumes, vapours and/or particulates in your laboratory turn to **Chemcap Clearview & Pro2**.

**SAFETY FIRST:** Ductless Fume Cabinets offer protection to laboratory staff when undergoing experimentation, testing or hazardous procedures that release fumes, aerosols, particles or vapours. Hazardous compounds are retained in a chemical filter and particulate HEPA filter (if fitted) and clean air is returned back to the laboratory. An operating Chemcap cabinet will remove odours and purify air within the laboratory. It freshens up the environment, making it a safer, more pleasant place to work and improves the wellbeing of laboratory personnel.

**SAFE FOR THE ENVIRONMENT:** Unlike conventional fume cupboards which vent directly to the atmosphere, these filtration based systems completely eliminate the release of hazardous compounds into the environment.

**ENERGY SAVING:** The main energy consumption of a Chemcap cabinet is the fan which creates the airflow. Conventional fume cupboards draw air-conditioned air out of the room and it is ducted away. Whenever possible use your Chemcap cabinet which saves the cost of heating or cooling replacement air for your laboratory.

**CONVENIENT:** An important feature of Chemcap cabinets is their portability; they can be moved easily to wherever laboratory procedures are to be undertaken. Less walking – less risk.

## Cabinet Filtration Technology

### Carbon filtration for chemical fumes and vapours.

Highly efficient Chemcap filters eliminate toxic substances and compounds within the recommended occupational exposure limit for pollutant gases having molecular weight equal to or greater than 30. Efficiency is 99.9% for the duration of the filter life and with no deterioration in filter performance.



### Particulate filtration for aerosols and particulates.

Pre-filters fulfil the need to arrest larger particles and are fitted to all Chemcap Pro2 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.

## KEY DEVELOPMENT

Improvements in the flow patterns in the design of Chemcap Clearview & Pro2 cabinets ensure that more of the carbon within the filtration bed is utilised and that retention capacity is maximised.

New Chemcap Clearview & Pro2 cabinets utilise filtration more effectively with an overall retention improvement of

20%



## Designed in improvements

Chemcap Clearview & Pro2 cabinets feature a new easy-to-use touchbutton on/off control panel with incorporated service due indicator and audible low airflow.

View of the working area is an unobstructed all-round 360° and this clearview vision makes a cabinet comfortable to use for long periods.

Increased operator access height (285mm).

Front access doors are lockable.

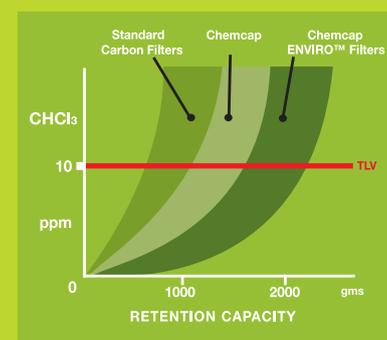
Powerful extraction system – face velocity is maintained at 0.5m/s (average).

The lamp is mounted within the fan housing, not within airflow no risk to cabinet integrity during lamp change.

Optional in previous generation of Chemcap but now included as standard equipment in Pro2:

- Audible electronic low airflow alarm
- Base containment tray
- Chemcap Enviro™ filters

## Filter performance



## Free Assessment Service

Please contact us for a free assessment and our chemist will undertake a risk analysis and suggest the best filter for your purposes.

You may download an assessment form at [www.bigneat.com/filtration/](http://www.bigneat.com/filtration/)

Check out the website at [www.bigneat.com](http://www.bigneat.com)

## Choosing your optimised Chemcap filtration

Bigneat offers a multi-purpose (universal) filter which should be selected when a fume cabinet is to be used for a variety of different procedures and handlings.

For best performance Bigneat's chemist recommends choosing an optimised filter which will give the best retention and a long filter life.

To check out which filter is best for your applications please download a Chemcap Filter Chemical Activity and Retention Listing Datasheet at: [www.bigneat.com/filtration/](http://www.bigneat.com/filtration/) or contact Bigneat's technical team.



Available on USB, CD or on the web



Fitting filters upon first installation (double filter stack shown).

## Filtration used in Chemcap Clearview cabinets

**Pre-filtration;** eliminates particles at 5.0 microns or larger to an efficiency of 92% as defined in BS EN 779.

**Carbon Filtration;** filtration efficiency of 99.9%, meets BS 7989:2001 Standard.

## OPTIONAL PARTICULATE FILTRATION

**HEPA filtration;** (H14 Standard) eliminates particles 0.3 microns or larger to an efficiency of 99.995%.

**ULPA\*;** (U16 Standard) has an efficiency of 99.999% for particle sizes of 0.1 – 0.3 microns MPPS (Most Penetrating Particle Size) as defined in EN 1822.

\*Optional particulate filtration upgrade.

## Filter selection

Filters OS and H <sup>+</sup> are suitable for most organic vapours and acid handlings. However we recommend when:	Composition of Vapours handled		Filter Type 2-stage without particulates	Filter Type 3-stage for chemicals with particulates (HEPA)*
Organic compounds predominate	ORGANIC VAPOURS secondary acids	→	Filter OS	Filter OS HP
Acid compounds predominate	ACID VAPOURS secondary organic vapours	→	Filter H <sup>+</sup>	Filter H <sup>+</sup> HP
Formaldehyde predominates	FORMALDEHYDE	→	Filter F	Filter F HP
Ammonia predominates	AMMONIA	→	Filter AM	Filter AM HP
Radioactive particles are present	RADIOACTIVE IODINE	→		Filter Ri HP
Mercury is present	MERCURY	→		Filter Hg HP
Uses are varied	MULTIPURPOSE (Universal)	→	Filter MP	Filter MP HP

\* Optional upgrade to ULPA (nanoparticles)

## Static or Mobile Bench



To make your cabinet truly portable, either select a mobile bench with integrated cupboard or an open box section bench (castors/fixed height).

Alternatively a static stand with levelling/adjustable feet may be selected (an adjustable height electronic model is available).



## Technical Information

Part No.	Description	Dimensions mm (external wxdxh)
MTC 1000	<b>Mobile Bench</b> robust epoxy coated mild steel construction, cupboard doors with magnetic catches and lockable 130mm castors.	1000 x 570 x 1145
MTC 1500		1500 x 570 x 1145
MTC 2000		2000 x 570 x 1145

Stand prefix is MT for box section stand, MTA for electronic adjustable height stand.



### Option

**SK** - Services Kit, mobile bench or stand to be supplied with swan neck water tap with drip cup, gas tap and electrical socket. The gas and water supply hoses are fitted with quick release couplings.



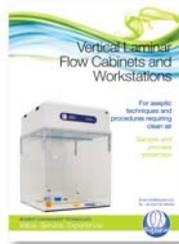
## Examples from the Bigneat range:



Robotics Enclosures



Powder Weighing Stations



Clean Air Cabinets

## Worldwide Representation



## More about Bigneat

Bigneat has been designing, manufacturing and maintaining just about every conceivable style of clean air safety cabinet for more than 35 years. Bigneat has grown from a national business to become a company with links worldwide and now enjoys an unrivalled reputation as the world's most innovative supplier in this specialist sector.

In addition to Chemcap Ductless Fume Cabinets, Bigneat manufactures fume cupboards, fume & dust arm extraction systems, biological safety cabinets, chemical storage systems, controlled environment enclosures & gloveboxes, laminar flow cabinets, PCR workstations, powder weighing cabinets and robotics & laboratory automation enclosures.

## Bespoke and custom-built cabinets & hoods

If you need a special size cabinet, or require a cabinet or hood to enclose laboratory automation or apparatus, Bigneat should be your first point of contact. We are happy to quote you for a specially built or adapted product.

## Quality Assured

Bigneat is accredited to BS EN ISO 9001: 2008  
Bigneat cabinets are CE marked



## Bigneat Limited

4 & 5 Piper's Wood Industrial Park, Waterberry Drive, Waterlooville, Hampshire PO7 7XU, UK  
Tel: +44 (0)23 92 266400 · Fax: +44 (0)23 92 263373 · E-mail: info@bigneat.com

# WORK SAFELY WITH BIGNEAT

Simple ordering process:

### STEP 1

Choose what size cabinet you need and which options you would like.

### STEP 2

Decide on the filter optimisation you require and whether you need particulate filtration (required for powders and fumes or compounds as specified by Chemcap Filter Chemical Activity Listing downloadable at [www.bigneat.com/filtration/](http://www.bigneat.com/filtration/)).

### STEP 3

Call us and ask for an **Instant Quote**.

## Keep costs low with Chemcap

Conventional fume cabinets must be installed into existing or new duct work – Chemcap cabinets do not require ducting or any associated building works.

## ENVIRONMENTAL STATEMENT:

Chemcap Cabinets are kind to the environment

- Long lasting construction and low environmental impact at installation.
- Eliminates the release of hazardous emissions into the environment.
- Reduces your CO2 footprint energy consumption (comparing ducted vs ductless).

Please visit our website at:  
[www.bigneat.com](http://www.bigneat.com)

BIGNEAT CONTAINMENT TECHNOLOGY

Value. Service. Experience.

