

# Excel Plus Safechange Workstation

For protection from hazardous airborne  
particulates and powders

Providing the greatest protection possible  
for the safety conscious laboratory



BIGNEAT CONTAINMENT TECHNOLOGY  
Value. Service. Experience.



# Excel Plus Safechange Workstation

Excel Plus Workstations are used in the laboratory for the most demanding powder handling applications, such as high accuracy weighing, processing of pellets, capsules and tablets and for dispensing of potentially toxic powdered compounds.

The Safechange cabinet in the Excel Plus range has been designed to provide the safest possible operation for both the user and maintenance staff.

Development and performance testing has been undertaken with the support of a leading pharmaceutical R&D company.

Excellent operator protection is achieved by enhanced airflow control and aerofoil technology which ensures that containment is achieved and maintained at the very low air flows required for balance stability.

## Performance and Testing

Lactose Testing on this cabinet has been conducted by a leading independent test house using a test procedure developed by a leading pharmaceutical company. Lactose powder is used as a tracer agent during a repeated weighing procedure, simulating real use of the cabinet. Atmospheric samples were collected at various points around the cabinet in replicate trials.

This test is ideal for a cabinet in the working laboratory environment, it challenges the filtration system and cabinet performance and measures for particulate breakthrough and ensures the minimum face velocity.

## Tests Conducted by a Leading and Independent Validation Company

There was no detectable breakthrough of any lactose particles during the testing of Excel Plus Safechange. Reports are available on request.

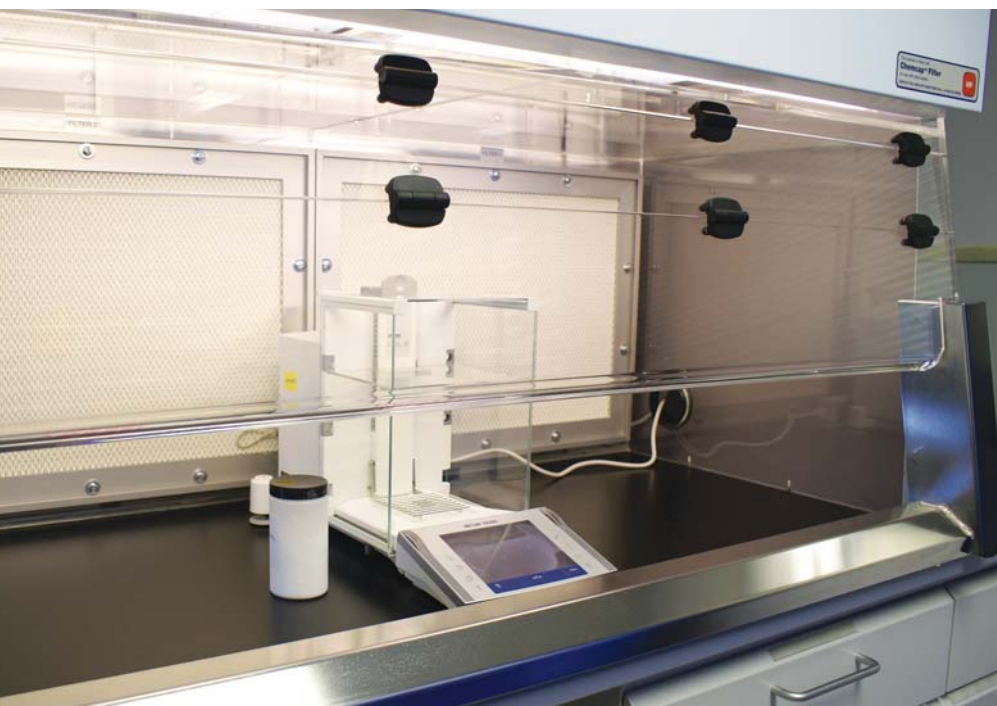


## Safety Features

- 'True Safechange Technology' eliminates the possibility of contamination either in the laboratory or upstream in ductwork and fan assembly.
- Double layer filtration provides extra filter system integrity.
- Visible and audible alarms alert user of unsafe flow conditions.
- Fan speed compensation for variation in flow during the lifetime of the filter maintains cabinet performance.
- Double hinged front visors can be opened for full access to the cabinet interior. Fan speed auto-increases to maintain working face velocity.

## Key User Features

- Gentle non-turbulent flow prevents balance fluctuation and cabinet dead spots.
- Five position balance gives stable and repeatable results.
- Angled clear front visors provide excellent vision of enclosed manipulations and comfort during use.
- 180mm height access across full cabinet width.
- Black work surface makes spillages visible.



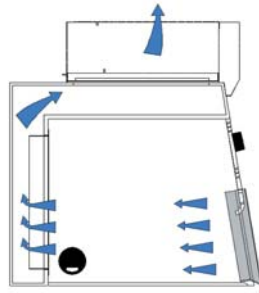
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# Technical Information

Model	Excel Plus 1006	Excel Plus 1306	Excel Plus 1606
Ext Dimensions (wxdxh) mm	1027 x 811 x 956	1327 x 811 x 956	1627 x 811 x 956
Int Dimensions (wxdxh) mm	979 x 545 x 500	1279 x 545 x 500	1579 x 545 x 500
Sound Levels	<60dBA		
Lighting	2 x sealed fluorescent light units		
Filtration	2 x double-layer HEPA filters (Grade H14)		
Face Air Velocity	0.3m/s – 0.5 m/s		
Electrical Supply	230V, AC, 50Hz, 5Amp, 1Ø or 110V, AC, 60Hz, 8Amp, 1Ø		

## System Principles

During operation the fan system draws in air at a rate determined best for the application. Air passes over the aerofoil, reducing turbulence, away from the operator and then through the double layer HEPA filters situated to the rear of the cabinet.



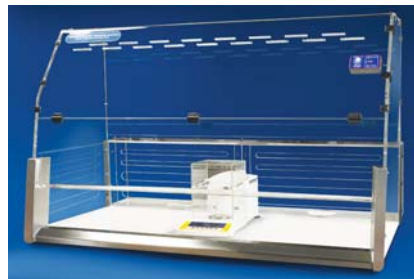
The electronic control system continually monitors the air flow measured by an anemometer located in the aperture at the front of the enclosure and automatically responds to any significant airflow disturbance within the laboratory.

The negative pressure environment that is created within the enclosure prevents contaminated air from escaping into the operators breathing zone.

## True Safechange Technology

- When filters need to be changed there is no compromise in safety. Integrated is a 'True Safechange' system enabling completely safe bagging of contaminated filters.
- 'True Safechange' is a mechanism that enables the safe removal of HEPA particulate filters. Replacement is performed under negative pressure, with the cabinet running.
- 'True Safechange' filter technology enables filter change under negative pressure (for changing filters safely this is a real alternative over a bag-in/bag-out system).

## Other Excel Plus Cabinet Models



## Quality Assured

Bigneat is accredited to BS EN ISO 9001: 2008



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## Options

- ULPA Filtration (Grade U16)
- Transfer spigot port on side of cabinet for waste and bag transfer.
- Ionising bars to eliminate dust attraction and control of the static environment.
- Electrical Sockets.



## Fan System and Airflow

Two large centrifugal, low noise fans are used to provide the airflow for this cabinet.

Electronic LCD control system monitors and adjusts the airflow to maintain safe working conditions.

Airflow can be set to between 0.3 and 0.5 m/s, depending on the application. The alarm settings are  $\pm 3\%$ .

## Filtration Technology

Two-stage filtration is used in this workstation. A dual set of filters comprising a pre-filter which removes particles  $>5$  microns, then a high capacity design (double layer) HEPA filter, certified to BS EN1822, removes particulate matter  $>0.3$  microns with an efficiency of 99.997%.

## Materials of Manufacture

The fan housing is fabricated from mild steel and finished in epoxy powder coated acid resistant coating – colour white.

The cabinet panelling is clear 10mm thick, cast acrylic, which incorporates a rear plenum containing the HEPA filters.

The aerofoil is manufactured from stainless steel. The work surface is manufactured from black laboratory grade laminate.

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