ENVAIR
Laboratory Equipment

LABORATORY FUME CUPBOARDS
ENVAIR ECO CHEM

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www.envairlab.uk

CLEAN TECHNOLOGY FOR A CLEAN ENVIRONMENT

ENVAIR ECO CHEM - THE CLEAN GENERATION

Envair have designed and manufactured Eco Chem ductless fume cupboards using the latest molecular filtration technology. This provides a safe working environment together with fume containment for protection from chemicals, vapours and aerosol in the laboratories. Eco Chem cupboards are available in two different versions: Eco Chem S series fume cupboards meet all routine requirements. Eco Chem M series units have additional microprocessor control.

This ensures that all functional and operational parameters are monitored, facilitating the correct operation of the fume cupboards. Eco Chem fume cupboards are used for the containment and removal of toxic vapours and aerosol, providing operator safety in a wide range of disciplines.

- **A** Multifunctional control panel
- **B** Hinged front window for easy cleaning
- **C** Acid resistant PVC work surface designed to channel the liquids spilt to the corners of the work surface.
  Stainless steel 304 available as an option
- **D** Safety glass frontal screen and side walls
- **E** Rear wall cut out to plug in external devices

TECHNOLOGY OF TODAY FOR THE WORLD OF TOMORROW

The filters used in the fume cupboards are manufactured from high grade coconut shell charcoal.
All types of activated charcoal used in these filters are of amorphous structure obtained from the heat controlled oxidation of coconut shells.
The cellulose structure of the coconuts provides the highest adsorption efficiency through a large surface area of up to 1050 m^2/gm.

FILTER TYPES

a) PRE-FILTERS
High performance pre-filters are designed to remove particulates from the air stream.
The filter material is based on electrets, which are permanently charged di-electrics.
They remove particulates from polluted air by strong electrostatic forces generated by the fibres from which they are made.
The combination of strong electric charges and open structure provides a filter with high efficiency, low airflow resistance and high loading capacity.
Pre-filter efficiency is equal to 75÷85% dust weight arrestance (ASHRAE).

b) MAIN FILTERS
Eight types of filter media are available.
Most of these are impregnated activated carbon, to provide a higher filter capacity for lower molecular weight organic compounds and inorganic gases and vapours.
A number of filter efficiency studies have been carried out, and all results using single bed filters show efficiencies very close to 100%.

1. A/C FILTER
The A/C filter is the most widely used filter in the range, and is used primarily for solvent fume removal.
It is manufactured from coconutshell based activated carbon of 4 x 8 USS mesh size and surface area up to 1050 m^2/gm.
Filtration is achieved by the physical adsorption of molecules in the pores of the activated carbon by Van der Waals forces.
Primary use: organic odours, hydrocarbons, aromatic solvents, animal odours, excrements, urines, acid odours, cadaverine, putrescine.
Secondary use: oxygenated nitrogen compounds.

2. ACR FILTER
This filter is impregnated with halide salts and is used for the high efficiency removal of iodine and methyl iodine.
It is frequently used for iodination reactions with low-level radioactive iodine and efficiencies in excess of 99,99% have been measured.
Primary use: radioactive iodine.
Secondary use: hydrocarbons.

3. FORM FILTER
This filter is impregnate with an oxiding agent to oxidise formaldehyde to form salts.
It is widely used in hospital pathology and cytology laboratories.
Primary use: formaldehyde.
Secondary use: organic emissions, hydrocarbons, aromatic solvents, acid gases.

4. SULF FILTER
Primary use: acid odours, putrescine, cadaverine, acid gases, hydrogen sulphide, methyl mercaptan, sulphur compounds, sulphur dioxide, R.H.>85%.

5. UR FILTER
Primary use: acid odours, putrescine, cadaverine, acid gases, hydrogen sulphide, methyl mercaptan, sulphur compounds, sulphur dioxide, nitrogen oxygenated compounds.
Secondary use: organic emissions, hydrocarbons, aromatic solvents, hydrocyanic acid, R.H. <85%.

6. CYAN FILTER
Primary use: hydrocyanic acid.
Secondary use: organic emissions, hydrocarbons, aromatic solvents.

7. MER FILTER
Primary use: mercury vapours
Secondary use: organic emissions, hydrocarbons.

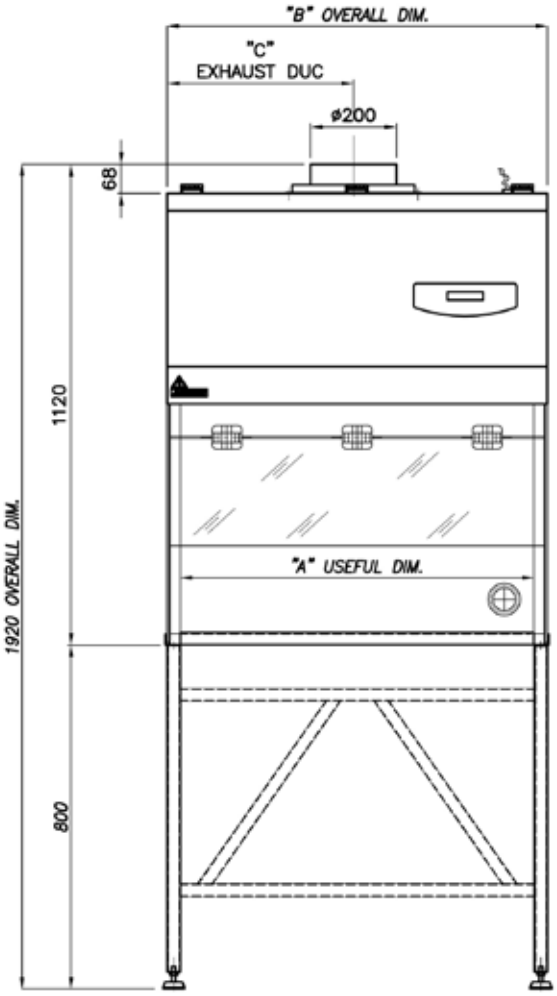
8. AM FILTER
Primary use: ammonia and its derivatives Secondary use: organic emissions, hydrocarbons, aromatic solvents, alkaline odours, excrement, urines animal odour.

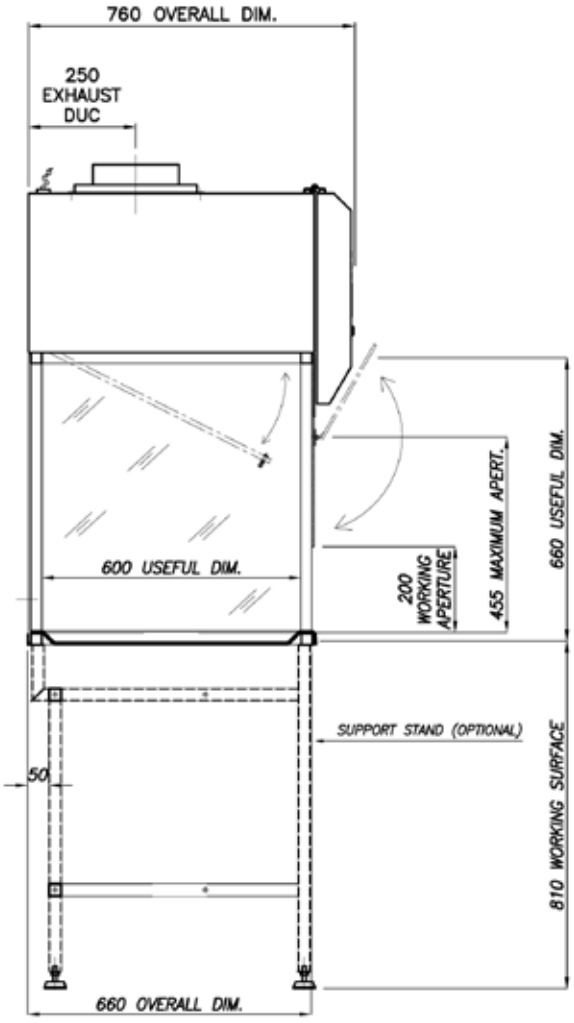
9. HEPA FILTER
Primary use: powder and particulate.

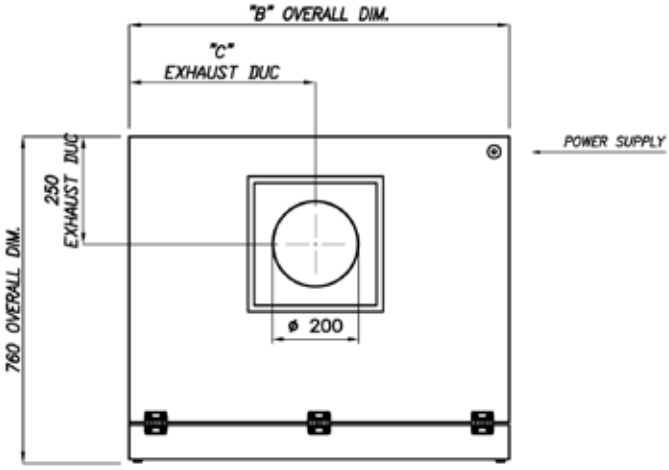
TECHNICAL SPECIFICATIONS

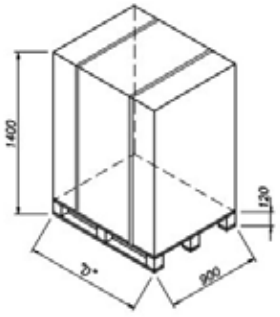
Envair Eco Chem				
Unit type:	06	09	12	15
Overall dimensions WxHxD	595x760x1120mm	885x760x1120mm	1185x760x1120mm	1500x760x1120mm
Useful dimensions WxHxD	533x600x660mm	823x600x660mm	1123x600x660mm	1438x600x660mm
Working aperture	200mm			
Max front aperture	455mm			
Net weight	70kg	85kg	100kg	115kg
Power consumption	88W	122W	207W	210W
Electrical data	1Ph+E 230V 50Hz			
Controls (S series)	Power on/off ▪ Light on/off ▪ Variable speed air regulation ▪ Hour-counter ▪ Stand-by green light			
Controls (M series)	Power on/off ▪ Light on/off ▪ Microprocessor monitoring system checking airflow, pre-filter and filter efficiency ▪ Variable speed air regulation ▪ Audible and visual alarms alert the operator to low/high airflow, fan failure, filter and pre-filter condition, black-out, gas detector and anemometer failure			

MODEL DIMENSIONS - Eco Chem S



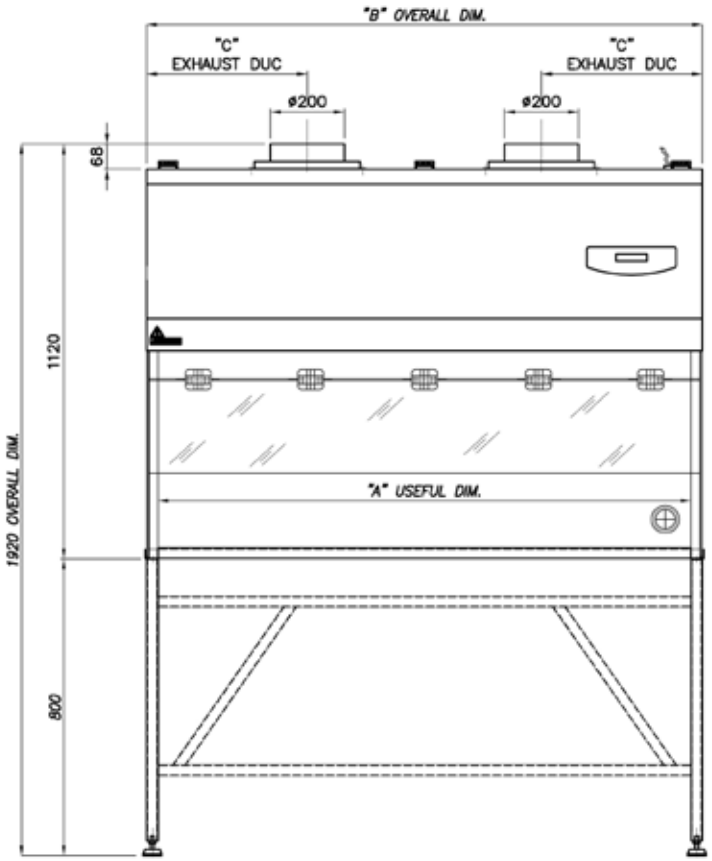


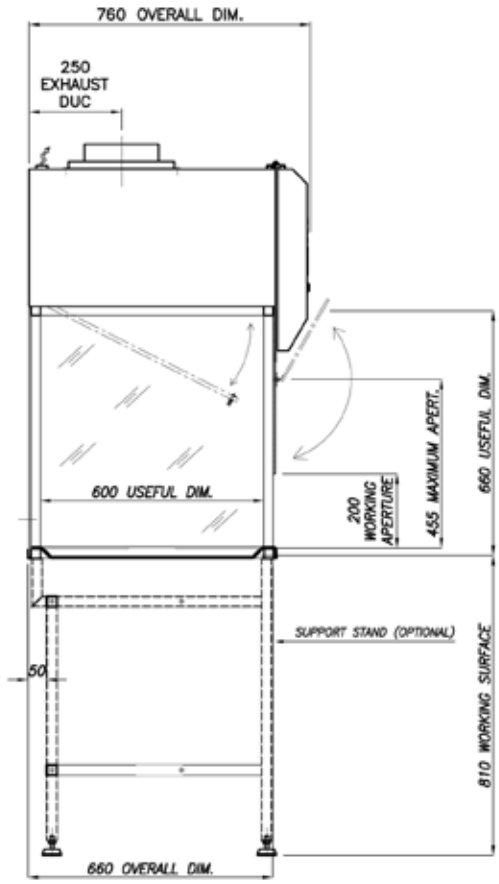


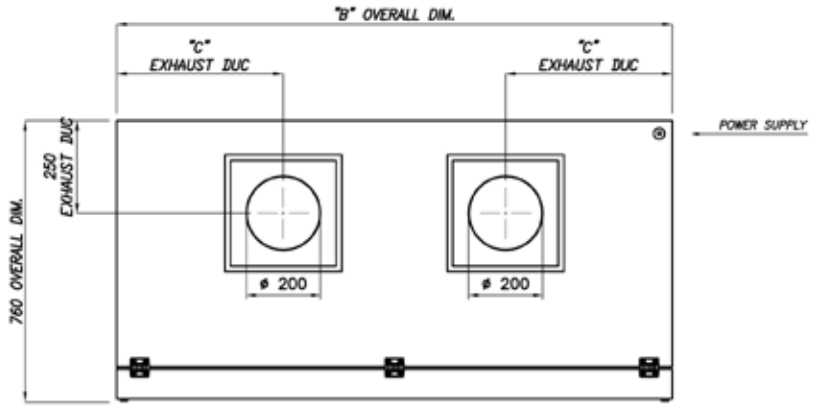


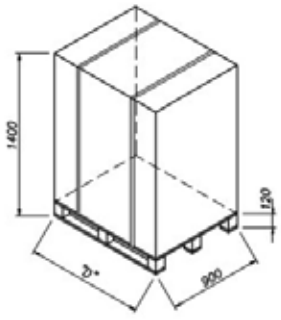
	06	09	12
A	553mm	823mm	1123mm
B	595mm	885mm	1185mm
C	300mm	445mm	595mm
D	1110mm	1110mm	1470mm
Gross weight	110kg	125kg	150kg

MODEL DIMENSIONS - Eco Chem M









	15	18
A	1438mm	1738mm
B	1500mm	1800mm
C	400mm	450mm
D	2060mm	2060mm
Gross weight	180kg	195kg

SERVICE IN PURE CULTURE

Envair offers service in pure culture. We do not simply sell our units to you but will assist you gladly from A to Z.

DELIVERY

Delivery, siting, commissioning and validation

SERVICE

- Service contracts available

SPARE PARTS GUARANTEE

- Stock held in the UK

MAINTENANCE

Envair Laboratory Equipement can provide service contracts to conform to the current standards.

- Microbiological Safety Cabinets DIN 12469
- Cytotoxic Dispensing Cabinets with KI-discus test DIN 12980
- Product Protection Cabinets
- Laboratory Fume Hoods
- Cytotoxic Dispensing Isolator EN 14644-7
- Isolator EN 14644-7
- Cleanrooms

SERVICE CONTRACT

To ensure ongoing reliability of your products and to take the nuisance out of maintenance, we can provide service contracts.

GUARANTEE AND WARRANTY

Combined with an Envair maintenance contract, we offer a 2-year warranty. Terms and conditions Apply.

QUALIFICATIONS

- IQ/OQ
- GMP
- GAMP
- 21 CFR Part 11

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For further information or to speak to one of our dedicated sales team, contact us:
t +44 (0) 3333 70 65 60 | e info@envairlab.uk

www.envairlab.uk

Wolf Laboratories Limited

www.wolflabs.co.uk

Wolflabs

Tel: 01759 301142 Fax:01759 301143 sales@wolflabs.co.uk

Use the above details to contact us if this literature doesn't answer all your questions.

Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.