

## Protection through Technology

Airflow through Labcaire Microbiological Safety Cabinets follows a very specific format to maximise containment.

Air is drawn in through the front aperture in a uniform manner via the unique grille configuration at a speed exceeding 0.6m/sec. This provides full protection to the operator.

It travels underneath the worksurface and behind the back panel of the cabinet where any particulate contamination is removed with the pre-filter (1 on diagram). The air is then drawn into the plenum chamber by the built in fan where 70% of the air is recirculated back into the cabinet via the first HEPA (High Efficiency Particulate Air) filter (2) at a speed of 0.4m/sec to create the laminar flow effect.

The remaining 30% is expelled through the exhaust HEPA filter (3) sited at the top of the cabinet where any hazardous pathogenic material is filtered out. On ducted cabinets, the air will pass through the anti-blowback valve (not shown) and be expelled through the ductwork.

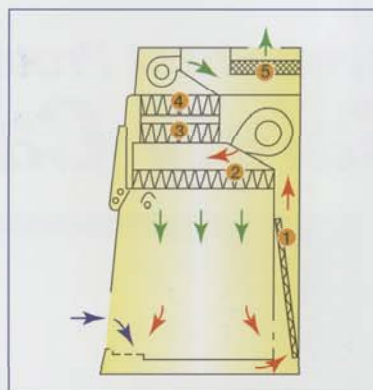
If the cabinet is recirculating back into your laboratory (SC'R' Versions), the remaining 30% will pass through the exhaust HEPA filter (3) before passing through a secondary exhaust HEPA filter (4), as well as a Carbon Filter (5), before being safely returned to the Laboratory. The secondary exhaust HEPA filter ensures that there is no possibility that any pathogenic material may escape for complete peace of mind. The Carbon Filter has the special function of removing the formalin fumes given off during cabinet fumigation and preventing any chemical contamination of the Laboratory.

## Total Quality Assurance

Compliance to BS 5726:1992 requires that any Microbiological Safety Cabinet is commissioned and tested at point of use.

Labcaire has a nation-wide team of skilled engineers who are able to provide this service.

Labcaire engineers can also help you plan your maintenance programme and service visits to ensure high safety standards are maintained throughout the working life of a machine.



Labcaire SC8R/SC12R/SC18R  
Recirculating Cabinet Airflow Diagram

| Specifications   | SC8D             | SC8R             | SC12D             | SC12R             | SC18D             | SC18R             |
|--|------------------|------------------|-------------------|-------------------|-------------------|-------------------|
| External Dimensions mm (WxDxH) – without services module | 800 x 710 x 1060 | 800 x 710 x 1215 | 1200 x 710 x 1200 | 1200 x 710 x 1360 | 1800 x 710 x 1200 | 1800 x 710 x 1360 |
| External Dimensions mm (WxDxH) – with services module    | 900 x 710 x 1060 | 900 x 710 x 1215 | 1300 x 710 x 1200 | 1300 x 710 x 1360 | 1900 x 710 x 1200 | 1900 x 710 x 1360 |
| Work area size mm (WxDxH)                                | 790 x 610 x 610  | 790 x 610 x 610  | 1190 x 610 x 610  | 1190 x 610 x 610  | 1790 x 610 x 610  | 1790 x 610 x 610  |
| Ducted   | ✓                | X                | ✓                 | X                 | ✓                 | X                 |
| Recirculating  | X                | ✓                | X                 | ✓                 | X                 | ✓                 |
| Compliance to BS 5726:1992                               | ✓                | ✓                | ✓                 | ✓                 | ✓                 | ✓                 |
| Exceeds Standard BSEN 12469:2000                         | ✓                | ✓                | ✓                 | ✓                 | ✓                 | ✓                 |
| Compliance to BS 5295                                    | ✓                | ✓                | ✓                 | ✓                 | ✓                 | ✓                 |
| CE Marking   | ✓                | ✓                | ✓                 | ✓                 | ✓                 | ✓                 |
| BSEN 61010   | ✓                | ✓                | ✓                 | ✓                 | ✓                 | ✓                 |
| Face Velocity  | >0.6m/sec        | >0.6m/sec        | >0.6m/sec         | >0.6m/sec         | >0.6m/sec         | >0.6m/sec         |
| Laminar Downflow Velocity                                | >0.4m/sec        | >0.4m/sec        | >0.4m/sec         | >0.4m/sec         | >0.4m/sec         | >0.4m/sec         |
| Membrane control panel                                   | ✓                | ✓                | ✓                 | ✓                 | ✓                 | ✓                 |
| Outlet Carbon Filter                                     | X                | ✓                | X                 | ✓                 | X                 | ✓                 |
| Anti-blowback valve required                             | Yes              | No               | Yes               | No                | Yes               | No                |
| Night door with safety interlocks                        | ✓                | ✓                | ✓                 | ✓                 | ✓                 | ✓                 |
| Services module with gas, electric & formalin vapouriser | Optional         | Optional         | Optional          | Optional          | Optional          | Optional          |
| Fluorescent Lighting                                     | 2 x 18w          | 2 x 18w          | 2 x 30w           | 2 x 30w           | 2 x 58w           | 2 x 58w           |
| UV Lighting – 254nm @ 15 watts                           | Optional         | Optional         | Optional          | Optional          | Optional          | Optional          |
| Pre-filter for all inlet air                             | ✓                | ✓                | ✓                 | ✓                 | ✓                 | ✓                 |
| Easy change filters                                      | ✓                | ✓                | ✓                 | ✓                 | ✓                 | ✓                 |
| Power Consumption  | 450w             | 625w             | 700w              | 825w              | 1300w             | 1650w             |
| Noise Level  | <60db(A)         | <60db(A)         | <60db(A)          | <60db(A)          | <65db(A)          | <65db(A)          |
| Weight (Kg)  | 180              | 190              | 210               | 220               | 250               | 250               |

**LABCAIRE**  
For Tomorrow's Environment

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# Microbiological Safety Cabinets

Class II  
Operator, Sample and Environment Protection

**LABCAIRE**  
For Tomorrow's Environment

# Operator, Sample and Environment Protection. Microbiological Safety Cabinets

Labcaire's latest range of Class II Microbiological Safety Cabinets are designed to meet the requirements of all types of Laboratories. A broad range of units are available in three different widths - 800mm, 1200mm and 1800mm with two types of installation, ducted or recirculated.

## Designed to ensure Standards compliance

The range of Safety Cabinets have been designed and tested to conform to and exceed the requirements of the latest British and European Standards. The units provide full compliance to BS 5726:1992 and exceed the requirements of BSEN 12469:2000.

The unique design and layout of the air inflow grille ensures that an even airflow is achieved over the entire aperture to optimise containment.

The membrane control panel offers full monitoring of both the airflow into the cabinet and the laminar air flow within the unit. It will alert the operator to any safety or maintenance requirements with both audible and visual alarms. The panel also controls the operation of all ancillary features such as electric, gas, formalin vaporiser and UV lighting.



**Labcaire SC8-D**  
With optional service module

## A choice of Ducted or Recirculating

When used in conjunction with the Labcaire anti-blowback valve, every Class II Cabinet can easily be connected to ductwork to exhaust air externally.

Wherever ducting a cabinet is not practical, easy installation is achieved with Labcaire's unique after-filter box which has three further features:

- an extra HEPA filter that ensures full protection
- an extra fan to ensure all airspeeds are maintained within the cabinet
- the addition of a high-efficiency Activated Carbon Filter that will absorb all fumes generated during the regular sterilisation of your cabinet with formalin

The work surface is constructed of 316-grade stainless steel, easily visible through the glazed sides of the cabinet and further enhanced by twin fluorescent lights above the working area.

## With options to suit all your requirements

All cabinets can be fitted with a service module instead of the right-hand side glazing panel. This module can include any combination of formalin vaporiser, natural and/or other gas outlet, electrical socket and water services. The optional UV lighting facility is operated from the control panel and is mounted in the head section.



**Labcaire SC8-R Cabinet**  
With optional service module



**Labcaire SC12-D**  
Without optional service module



Membrane Control Panel

- Operator, sample & environment protection
- Ducted or Recirculating versions available
- Carbon filter for formalin fume removal (Recirculating only)
- Available in three sizes, 800mm, 1200mm & 1800mm
- Designed and tested to exceed requirements of BS 5726:1992 and BSEN 12469:2000
- Internal cleanliness to BS 5295
- Aperture face velocity > 0.6m/sec
- Laminar downflow velocity > 0.4m/sec
- Unique air intake grille configuration
- All filter seals under negative pressure
- Pre-filter for all inlet air to prolong main filter life
- Pre-filter easily changed from within cabinet
- Membrane Control Panel with LED display
- Audible / Visual airflow display and alarm
- Front screen alarm
- Night door safety interlocks
- Easy access to all filters for full maintenance requirements
- End toughened glass windows for observations
- Twin fluorescent lighting for worksurface illumination
- Removable stainless steel worksurface and air intake grille
- Optional side mounted service module containing:
  - Formalin Vaporiser with unique semi-automatic operating system
  - Natural Gas Outlet
  - Electric Socket
  - Other Gas Services
- Other options include:
  - UV Light with automatic timer
  - Base Stand - with footrest
  - Lockable Undercupboard
  - Stainless Steel Spillage Tray



Unique air-intake grille design



Optional integral Formalin Vaporiser



Gas and electric facilities available