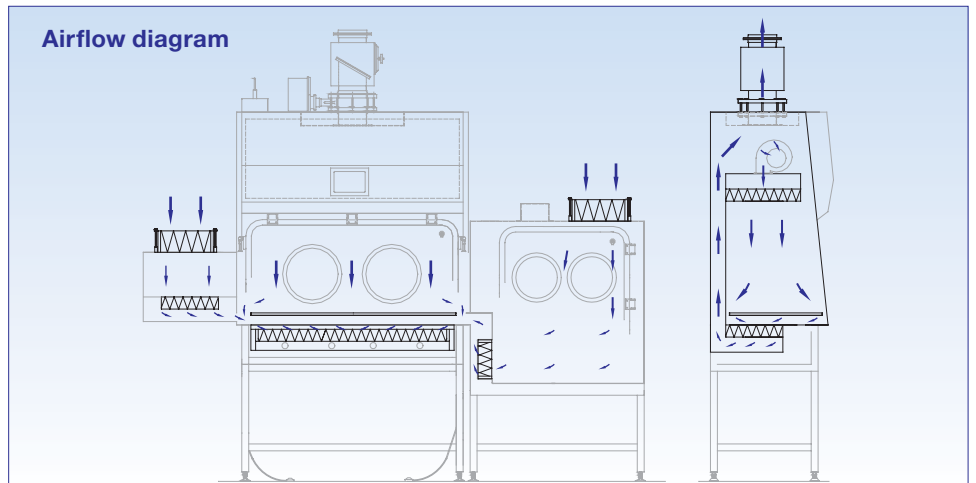




### For safe aseptic blood labelling in nuclear medicine

- Negative pressure for operator protection and safety
- EU GMP Grade A unidirectional airflow work area for aseptic work and product protection
- Transfer chamber with electromagnetic timed interlocks and high air change rates for total suppression of airborne contamination during material transfers in and out, and for rapid evaporation of disinfecting agents
- Centrifuge transfer chamber with mechanically locked visor
- Most commonly used centrifuges catered for
- Automated pressure decay leak test for indicating results and monitoring trends
- PLC controls for easy set up, operation and maintenance
- Good access to all potentially contaminated areas to facilitate cleaning
- Safe to change main (primary) filter
- Two-glove standard model. Thimble exhaust units also available

**Airflow diagram**



**Envair Limited**

York Avenue, Haslingden,  
Rossendale, Lancashire,  
England BB4 4HX

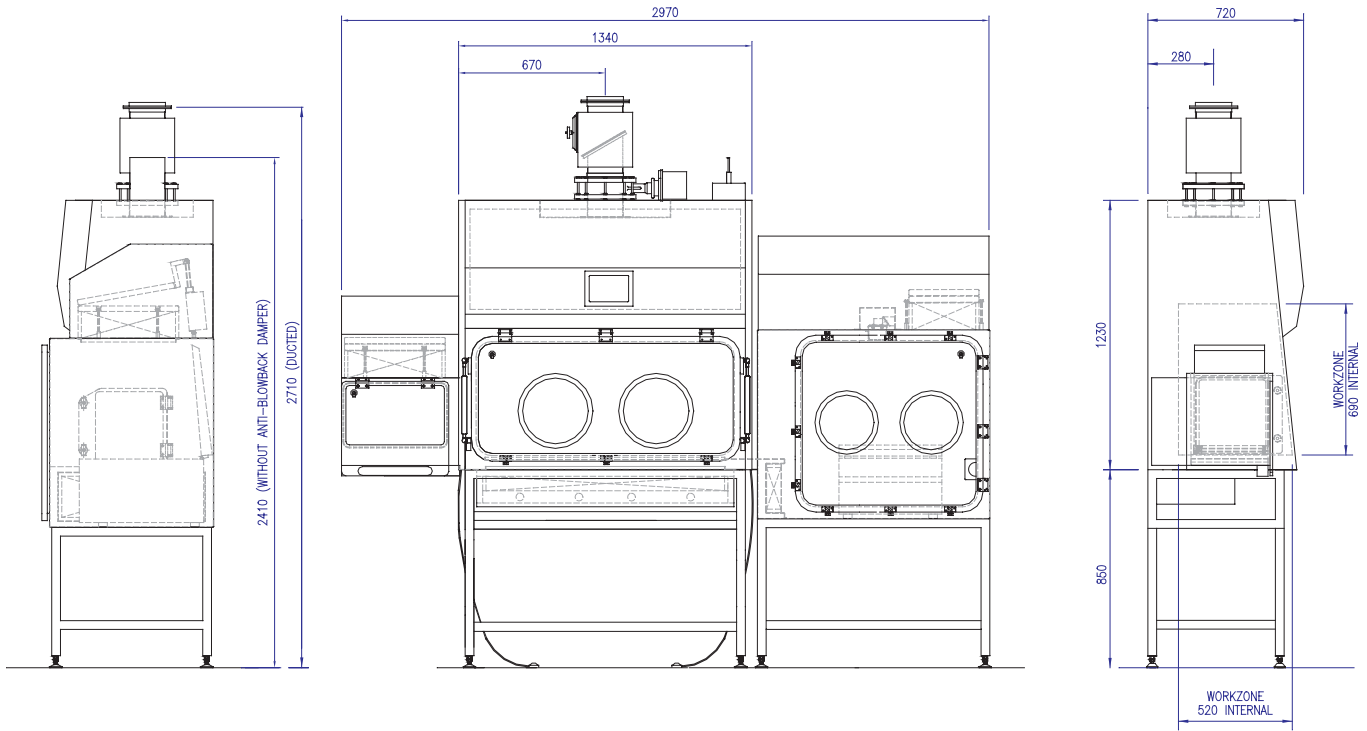
T: +44 (0) 1706 228 416

F: +44 (0) 1706 242 205

E: [info@envair.co.uk](mailto:info@envair.co.uk)

W: [www.envair.co.uk](http://www.envair.co.uk)

## Model designations and dimensions



Model	Model Description	Wt Kg	Power Watts	Exhaust m <sup>3</sup> /s
2G2D	Two glove ports, two transfer chambers, exhaust spigot for connection to dedicated exhaust system (see note below) *	500	600	0.1

\* Exhaust system requires remote fan which should be ordered from Envair or to Envair's specification

### Standards compliance:

- BS EN ISO 14644
- EU GMP
- BS EN 1822 (HEPA filters)
- IEC 61010-1:2001 (Electric wiring)
- 'Pharmaceutical Isolators' Pharmaceutical Press 2004
- AS 4273:1999 (when optional activated carbon filter is fitted)

## Specification and options

Main Chamber	<p>White polyester coated stainless steel internally</p> <p>Optional 316L stainless steel polished internally</p> <p>Unidirectional airflow (vertically downwards) - 0.4 m/s +/- 20%</p> <p>Downflow air change rate indicative 2000 air changes per hour</p> <p>316L stainless steel removable dished worktray</p> <p>Optional stainless steel hanging rail with six hooks</p> <p>3mm Lead lining to base and front lip</p>
Transfer Device	<p>D type double HEPA filtered transfer chamber with electromagnetic interlocks on adjustable timers, footswitch for inner doors, and sliding tray</p> <p>High air change rate indicative 2000 air changes per hour</p> <p>White polyester coated stainless steel externally and internally</p> <p>Easy clean transfer hatch cowl</p>
Calibrator Transfer Device	<p>D type double HEPA filtered transfer chamber with mechanical locking on visor</p> <p>High air change rate indicative 330 air changes per hour</p> <p>Lead acrylic main visor (1.1mm Pb equivalent)</p> <p>Sealed internal fluorescent light with easy clean diffuser</p> <p>Easy clean transfer hatch cowl</p>
Stand	<p>Polyester coated mild steel table frame with adjustable levelling feet</p> <p>Optional stainless steel polished all over</p>
Access	<p>Large opening lead acrylic visor (1.1mm Pb equivalent), supported by gas springs in the open position, and complete with bonded 300 mm diameter sleeve ports</p> <p>Optional elliptical ports or other port diameters upon request</p> <p>Fabric lined polypropylene sleeves, universal cuff-rings and all associated O-rings for the Envair 'safer aseptic glove change' when used with suitable sterile-wrapped, beaded, powder-free gloves</p> <p>Optional gauntlets</p>
Controls and electrics	<p>PLC control system with touch control HMI panel and two level password protection</p> <p>Digital display for isolator functions and transfer chamber operation</p> <p>Optional digital display of transfer chamber pressure</p> <p>Selectable digital display for internal pressure, primary filter pressure drop and downflow air change rate</p> <p>Fully automatic pressure decay test including actuated sealing lids for transfer chambers and motorised shut-off damper for exhaust</p> <p>Latched audible and visible alarm for internal pressure and downflow air change rate failure and for transfer chamber door not closed. Alarm mute. Battery back-up for alarms.</p> <p>Sealed fluorescent lighting giving 500 lux at the work surface</p> <p>Electrics designed for 230v/50Hz1Ph supply</p> <p>Optional alternative electrical supplies – to be specified by purchaser</p>
Airflow and filtration	<p>The primary HEPA filter underneath the work tray filters the mixture of downflow air and air that has entered through the double HEPA-filtered transfer chambers. The combined filtered airstream passes up behind the main chamber to the downflow fan/HEPA filter system and the exhaust system. Both the exhaust system and the downflow fans are thus downstream of the primary HEPA filter.</p> <p>The primary HEPA filter can be sealed and removed into a bag for safe disposal.</p> <p>Potentially contaminated airways and plenums are under negative pressure</p> <p>Vertically mounted anti-blowback damper and manual shut off valve on exhaust (D models only)</p> <p>All HEPA filters H14 (BS EN 1822-1:1998)</p> <p>Optional remote extract fan</p> <p>Optional exhaust carbon filter for compliance with AS 4273:1999</p>
Testing and maintenance	<p>DOP/particle counter test ports in visor of main chamber and in outer doors of transfer chambers</p> <p>All maintenance from front of unit with lockable front panel for control hardware and downflow system</p>
Additional options	<p>Optional thimble system model</p> <p>316L stainless steel polished internally and externally</p> <p>13 amp single splashproof socket</p> <p>Cable gland for computer connection</p> <p>Sealed computer screen in rear wall of main chamber</p> <p>CCTV monitoring and recording system</p> <p>Stainless steel tri-clover connections for particle counting sampling head</p> <p>Vapour phase hydrogen peroxide biodecontamination system</p> <p>1.5mm or 2.2mm Pb equivalent lead acrylic visors</p> <p>3mm lead lining to work area sides and rear</p> <p>Glove sleeve leak test disc with digital manometer</p> <p>Validation with documentation for IQ/OQ including FAT and SAT, or to full GAMP</p>

Note: All items shown in blue are alternatives or additional options

Envair has a policy of continuous improvement and reserves the right to change this specification without notice

# Complete range of Envair products and services

## Isolators



CDC F cytotoxic dispensing isolators



Pharm-Assist isolators



Technetium isolator for nuclear medicine



Blood labelling isolator for nuclear medicine



Negative Pharm-Assist isolators



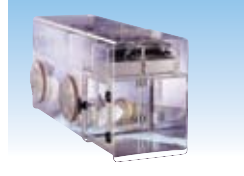
Customer specified isolators



Sterility test isolators



Controlled atmosphere isolators



Micro-Iso and Mini-Iso

## Unidirectional airflow products



HLF horizontal unidirectional (laminar) airflow cabinets



VLF R vertical unidirectional (laminar) airflow cabinets



C-Flow vertical unidirectional (laminar) airflow cabinets



VLF E vertical unidirectional (laminar) airflow enclosures



FFM fan filter modules

## Powder handling products



Downflow booths



High accuracy balance weighing isolators



C-Flow-W powder weighing cabinets



RHLF reverse flow cabinets

## Microbiological safety cabinets



Class I microbiological safety cabinets Bio 1+



Class II microbiological safety cabinets Bio 2+



Class III microbiological safety cabinets Bio 3+

## Fume cupboards



Carbon filtered recirculating fume cupboards



Ducted fume cupboards

## Turnkey projects

Envair clean air and containment products integrated with cleanrooms built by other members of the Bassaire Group.

## Service and maintenance

Full testing, service, maintenance and spares support for all Envair and other clean air and containment equipment.



Integrity in clean air

### Sales

T: +44 (0) 1706 242201  
F: +44 (0) 1706 242205  
E: sales@envair.co.uk

### Service

T: +44 (0) 1706 242202  
F: +44 (0) 1706 242205  
E: service@envair.co.uk

### General

T: +44 (0) 1706 228416  
F: +44 (0) 1706 242205  
E: info@envair.co.uk