



\* Not representative of final image. Unit shown as individual units without ducting

# Isoclean®

## Healthcare Platform Isolator (Inflatable Seal Model)

### Introduction

The **Isoclean® Healthcare Platform Isolator – Inflatable Seal Model (HPI-G3-IS)** facilitates the isolation of a product/process while providing the required sterile environment. HPI-G3 is designed with FDA-approved static seals, while HPI-G3-IS is designed with inflatable seals and automated dampers. The standard unit is integrated with auto pressure hold testing and mobile BioVap™ (hydrogen peroxide biodecontamination system with H<sub>2</sub>O<sub>2</sub> sensors and catalytic converter). Integration of Esco mobile BioVap™ allows master biodecon that can only be performed with internal doors open. It also comes with an automated sliding door feature for closing and opening of the inner passthrough chamber door. This improved design facilitates ease of isolation control especially during pressure decay testing and bio-decontamination process.

This model is available in positive or negative pressure regime, and in recirculating or total exhaust configuration.

### Applications

- Aseptic and/or Potent Compounding
- Pharmacy Compounding (TPN/ Chemotherapy)
- Sterility Testing
- Aseptic Filtration
- Cell and Gene Therapy
- Peptide Production
- Biosafety Facilities Level 3 or 4
- Benchtop/Small-scale Aseptic Formulation and Filling
- Small-scale Potent Material Handling
- Cosmetic/Cosmeceutical
- R&D and Clinical Trials

### Main Features

- Capable of automated pressure hold testing (APHT)
- ULPA filters (as per IEST-RP-CC001.3 and HEPA (H14) filter (as per EN 1822) with a typical efficiency of > 99.999% at 0.1 to 0.3 microns; provide superior ISO Class 5 air cleanliness as per ISO 14644-1
- Containment enclosure classification: Class 2 via auto pressure leak test (factory acceptance test) and Class 3 via automated pressure test as per ISO 10648-2 (prior to daily tasks).
- Inflatable seal and automated dampers for improved and safer isolation control during pressure decay testing and bio-decontamination process
- Esco HMI Control system supervises all cabinet operations and monitors cabinet performance
- Electromagnetic interlocking doors with time delay effect ensures safety and containment during material transfer
- Foot switch activated auto sliding doors with light barrier

### Options:

- Available in Negative or Positive Pressure model, in Recirculating or Total Exhaust airflow
- Integration of Esco mobile BioVap™ biodecontamination system (H<sub>2</sub>O<sub>2</sub> biodecontamination with sensor and catalytic converter)
- Integration of a side-mounted 24L CO<sub>2</sub> Incubator
- Glove Leak Tester
- Glove Port sizes
  - 300mm
  - 300 x 200 mm
- CCTV integration
- Height adjustable stand
- Access to rear view monitor system
- With option for three-way pass through chamber in between 2 units of 2-glove, 3-glove, or 4-glove isolator combination.
- Other configurations available:
  - 2-glove + 2-glove + 2-glove units
  - 4-glove + 2-glove units
- NEBB Cleanroom Performance Testing for Validation
- Optional PQ Support

### Isoclean® Healthcare Platform Isolator – Inflatable Seal Model Airflow Pattern

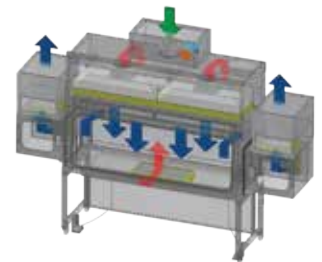
#### Positive Pressure, Recirculating Model

Ambient air is pulled through the inlet pre-filter and main filter located on top of the isolator. The HEPA (H14) downflow filter creates a laminar air flow providing ISO Class 5 air cleanliness (ISO 14644-1) to the main chamber.

A percentage of the air from the work zone is recirculated back to the chamber. The fan pulls the purged air back to the plenum which again passes through the HEPA (H14) downflow filters, resulting to the air being recirculated back to the work zone and pass-through.

Meanwhile, a percentage of air is pulled towards the perforations at the rear wall inside the work zone, which is then transferred to the pass chamber via the network of HEPA (H14) filters located at its own rear walls. The filtered air is then exhausted out through the top portion of the PTC after passing through another stage of HEPA (H14) filters.

A percentage of purged air is exhausted through the filters to prevent heat build-up inside the isolator. Exhausted air will then be replenished by ambient air coming from the top inlet pre-filter and the main filter.

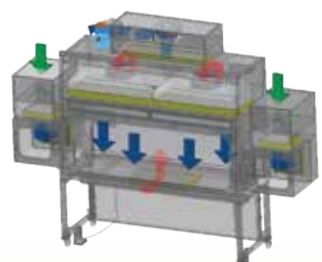


#### Negative Pressure, Recirculating Model

Ambient air is pulled through the inlet pre-filter and HEPA (H14) filter located on top of the passthrough chambers of the isolator. The air is then pulled by the fan towards the rear wall of the PTC and goes to the back plenum.

It passes through the HEPA (H14) downflow filter again, resulting to the air being recirculated to the work zone.

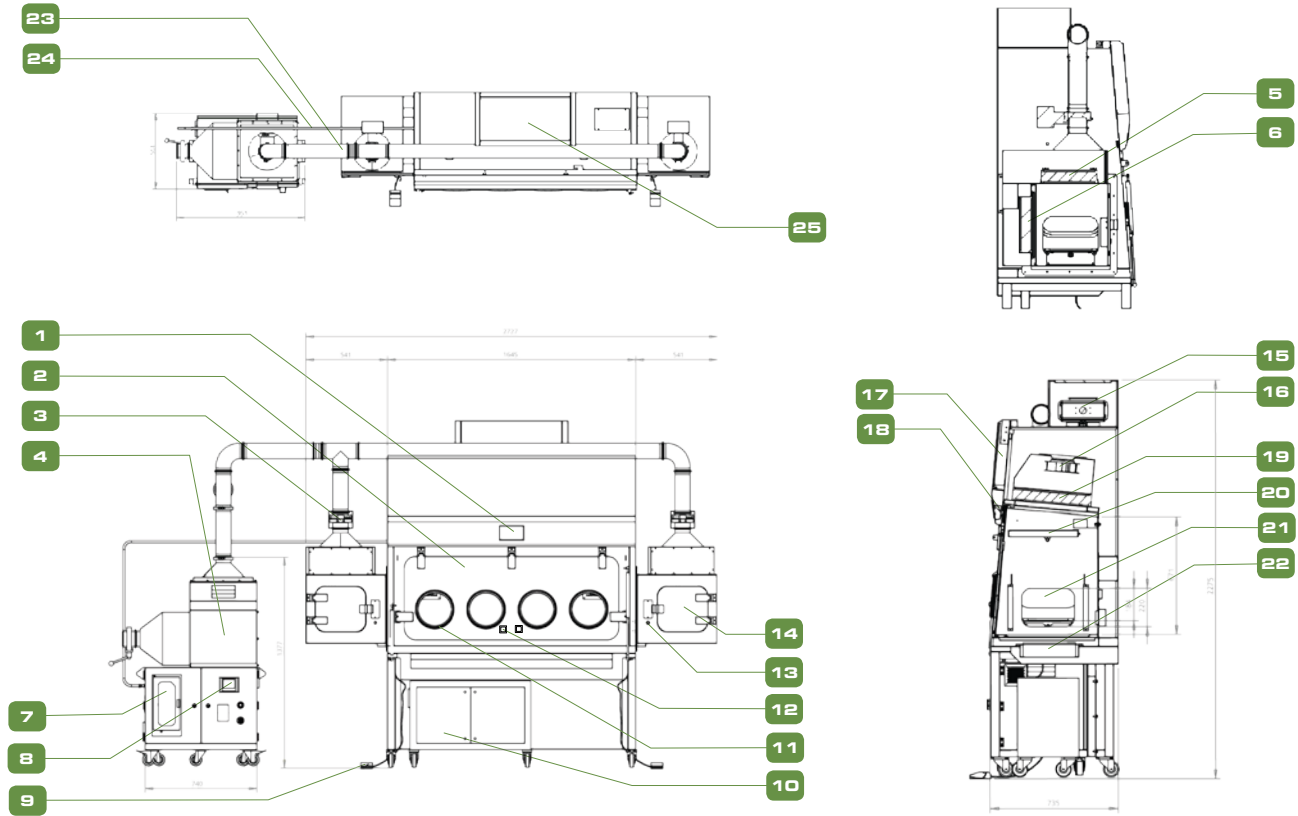
The HEPA (H14) downflow filter creates a laminar air flow providing ISO Class 5 air cleanliness (ISO 14644-1) to the main chamber. Exhausted air is then replenished by ambient air coming from the top inlet pre-filter and the main filter.



## Isoclean® Healthcare Platform Isolator – Inflatable Seal Model

Isolator Unit		Model		No. of Gloves		Voltage Code		Pressure		Airflow		Passthrough Chamber		Sharps Bin Inside	
HPI	Isoclean® Healthcare Platform Isolator	IS	Inflatable Seal	2G	2 Gloves	8	220-240 VAC, 50/60 Hz	N	Negative	S	Single-Pass/ Total Exhaust	0	No PTC	S	with Sharps Container inside main chamber
				3G	3 Gloves	9	110-120 VAC, 50/60 Hz	P	Positive	R	Recirculating	L	1 PTC Left	O	Without Sharps Container
				4G	4 Gloves							R	1 PTC Right		
												B	1 PTC Both sides		

## ENGINEERING DRAWING



### HPI-G3-IS

- |   |  |   |  |
|---|--|---|--|
| 1. Esco HMI   | 7. Esco mobile BioVap™ (biodecontamination system)   | 12. Electrical outlet (optional) electrical panel | 19. Process chamber inlet HEPA filter              |
| 2. Polycarbonate hinged window with inflatable seal | 8. BioVap™ controller display                        | 13. Pass chamber outer door switch                | 20. IV bar, sliding (optional)                     |
| 3. Automatic valve (exhaust)                        | 9. Footswitch for pass chamber inner door            | 14. Pass chamber outer door                       | 21. Pass chamber inner door                        |
| 4. Catalytic converter with exhaust fan (optional)  | 10. Onboard compressor (for BioVap™ & pressure test) | 15. Automatic valve (inlet)                       | 22. Process chamber return HEPA filter             |
| 5. Pass chamber exhaust filter                      | 11. Round glove port, 300mm                          | 16. Process chamber inlet fan                     | 23. H <sub>2</sub> O <sub>2</sub> aeration piping  |
| 6. Pass chamber inlet filter                        |  | 17. Electrical panel                              | 24. H <sub>2</sub> O <sub>2</sub> injection piping |
|   |  | 18. LED light                                     | 25. Pre-filter (inlet air)                         |



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