



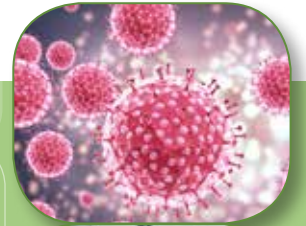
*Esco Streamline® Containment Isolator Class III  
Model SCI-3G8-N3SL-III*

# Streamline®

## Containment Isolator Class III

**(Negative, Total Exhaust Model)**

*Your Containment Solution for Infectious / Biohazardous  
Material Handling*



# STREAMLINE® CONTAINMENT ISOLATOR



Streamline® Containment Isolator Class III (SCI Class III) provides the highest level of personnel, product, and environmental protection against highly infectious microbiological agents and other hazardous biosafety level (BSL) 2+ to BSL-4 materials by isolating the main process in a negatively pressured system.

## Key Benefits

- Designed in compliance to international cGMP standards
- World's most certified Class III Isolator BSC, Compliant to all international biosafety standards
- Class 2 Leak Tight Containment, as per ISO 10648-2
- ISO Class 5 air cleanliness as per ISO 14644-1
- Fast purging time



SCI Electrogalvanized Steel Total Exhaust Unit



SCI Stainless Steel Total Exhaust Unit

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## Comparison between SCI - Class III and AC3 units

PRODUCT	Streamline® Containment Isolator - Class III (SCI Class III)	Airstream® Class III Biological Safety Cabinet (AC3)
Design	BS EN 12469, NIOSH, OSHA, NSF/ANSI 49-2016, YY0569 Chinese standards, ISO 14644-1:2015, GMP, PIC/S	EN 12469, Europe
Containment Applications	Pressure tested as per Class 2 leakage tightness (ISO 10648-2) and can undergo daily <i>in-situ</i> pressure testing	Not possible for <i>in-situ</i> pressure hold test
Decontamination	Quantifiable and highly reproducible method via automated H <sub>2</sub> O <sub>2</sub> BioVap™ biodecontamination system	Not applicable
Glove Leak Test	Pressure leak test can be done daily via quantifiable glove integrity tester (optional accessory)	Not applicable
Downflow Velocity	SCI III standard design with ducting and external exhaust fan has downflow velocity of 0.40m/s ± 20% (except 3G model = 0.35m/s ± 20%). But for clients/facilities without capacity to provide 100% ducting system, unit can have the optional integrated exhaust blower module with downflow velocity of 0.20 m/s ± 20%.	AC3 has no downflow velocity test as it does not have supply fan. It only has exhaust fan to create negative pressure in chamber.
Enhanced Ergonomics	Designed with a sloped front angle for enhanced ergonomics, and to allow personnel operation while seated and/or standing.	Ergonomically designed to allow personnel operation while in a seated position.
Pass box	Dynamic	Static



## Options and Fixtures

- Top Exhaust Connection  
*\*Note: Additional carbon filter is available*
- UV lamp
- Anti-blowback valve

## Main Features

- HEPA (H14) filters with a typical efficiency of >99.995% at 0.1 to 0.3 microns, providing ISO Class 5 air cleanliness as per ISO 14644-1.
- Bag-In, Bag-Out (BIBO) filters with standard Side Exhaust Connection
- Sentinel™ Gold Microprocessor controller supervises all functions and monitors airflow and pressure in real-time
- Work zone and pass-through interchange are under negative pressure to the room to maintain operator protection in the event of a breach in the barrier isolation system
- Robust dual-wall construction. Unique Esco Dynamic Chamber™ plenum surrounds filter seals with negative pressure
- Electromagnetic interlocking door with time delayed ingress/egress control to minimize particle entry; assuring work sterility during material transfer
- Ergonomically angled front to improve reach and operator comfort
- Single piece, leak-tested assembly guarantees maximum protection and flame and abrasion resistant
- FDA-grade air-tight seals
- Work zone without crevices and easy to clean
- With drain pan at the bottom
- Options for external material of construction:
  - Electrogalvanized steel with ISOCIDE™ powder coating
  - Full stainless steel 304 exterior
- Optional sharps disposal system (inside)
- Foot switch to easily access inner doors

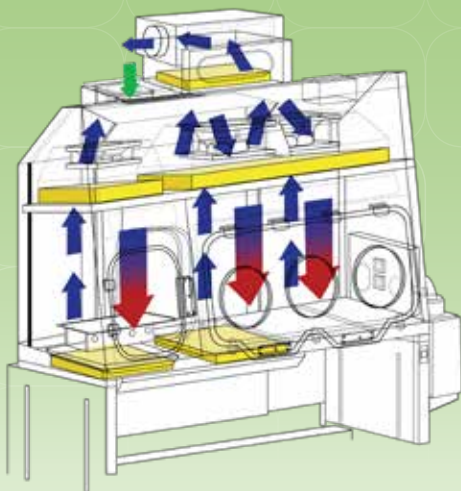


## Safety and Certification

	Design	Cabinet Performance	Air Cleanliness	Electrical Safety
Standard Compliance	BS EN 12469*, NIOSH, OSHA, NSF*/ANSI 49-2016, YY0569 Chinese standards*, ISO 14644-1:2015, GMP, PIC/S	ISO Class 2 Leak Tight Containment as per ISO 10648-2, IEST-RP-CC034.1, Worldwide CETA CAG-002-2006, NSF49:2002	ISO 14644-1 Class 3 (at rest), Class 5 (in operation), EU GMP Grade A, IEST-G-CC1001, USA, IEST-G-CC1002, USA, IEST-RP-CC007.1, Worldwide, IEST-RP-CC001.3, Worldwide	IEC 61010-1, Worldwide EN 61010-1, Europe UL 61010-1, USA CAN/CSA-22.2, No. 61010-1

All components used in Esco products meet or exceed all applicable safety requirements.

\* To comply with biosafety standards, NSF 49, BS EN 12469, YY0569 Chinese standards, or other local standards, the unit must be linked to external blower or building exhaust to meet each standard's negative pressure requirement.



■ HEPA-filtered air    ■ Room air / Ambient air    ■ Unfiltered / Potentially contaminated air

### Total Exhaust

- Ambient air is pulled through the inlet pre and main filter via the main fans at the top of the isolator. This creates positive pressure on the plenum which provides the downflow of air.
  - The pre-filter extends the life of the filters by trapping larger particulates that can easily clog the main filters.
- This downflow supply then provides an ISO Class 5 environment and unidirectional airflow inside the isolator; thus, protecting the materials inside the main chamber and pass-through.
- Air from the work zone and pass-through is then quickly purged by the fans to keep the area clean. The purge is completely exhausted through HEPA filters as well; ensuring that only clean air is exhausted back to the environment.

The Streamline® Containment Isolator Class III (SCI Class III) in ducted or single pass configuration solely operates in a negative pressure, with its on-board fan providing -37 Pa (min) to -125 Pa (max) in the process chamber. It provides an ISO Class 5 unidirectional total exhaust airflow, ensuring the sterility of the work zone during the whole manufacturing process. It is also equipped with double exhaust HEPA filters via Bag-In, Bag-Out (BIBO) system to prevent untoward exposure during filter change procedures. It has an option to place one (1) dunk at the side of the work zone (external).



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### Plug and Play!

For clients or facilities that do not have the capacity to provide a 100% ducting system, the SCI Class III and its optional feature for an integrated\* enhanced blower exhaust module system, can easily achieve a pressure of up to -125Pa.

*If a higher negative pressure is needed to meet other local BSL standards, the unit must be linked to external blower or building exhaust.*

*\*Please note that the integrated enhanced blower exhaust module system is only available in 230V.*

## Isolator Class III Models

### SCI-2GC8-N3SL-III

Isolator Unit	Model	No. of gloves - Nominal Width		Glove port design	
Streamline® Containment Isolator	SCI	2G	5 ft (1.6m)	C	Circular glove port (300 mm x 300 mm)
		3G	6 ft (1.95m)	O	Oval glove port (200 mm x 300 mm)

To avail dunk tank option MUST INDICATE CLEARLY in PO:

1: With dunk tank

0: Without dunk tank



## Add-Ons

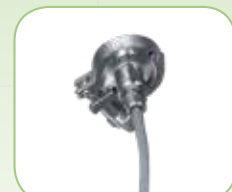
- Monitor System
  - Mounted on the rear of the isolator
  - Beside the front panel; equipped with a keyboard and mouse arm
- Glove leak tester
- Automated pressure hold testing (APHT) with on-board pump (contact Esco for more information)
  - With on-board compressed air
- CCTV integration
  - Back wall
  - Front of the visor with a stainless steel mount
- Back-up battery for the electromagnetic interlocks (contact Esco for more information)
- Side syringe pass-through chamber (100mL, 250mL, 500mL, and 1L)



Adjustable foot rest



Stainless steel turntable



Tri-clamp connection



Laboratory cart



Butterfly Valve:

- Manual
- Automatic



IV bar with hooks



**Integrated BioVap™  
Biodecontamination System**  
capable of achieving a 6 log  
reduction in bioburden.

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## Electrical Outlets and Utility Fittings

- Electrical outlet, ground fault, North America
- Electrical outlet, Euro/Worldwide

## Support Stands

- Fixed height, available 711 mm (28") or 864 mm (34") - With levelling feet, ± 38.1 mm (1.5") (SAL) - With casters (SPC)
- Telescoping height stand for levelling feet (STL), nominal range 660 mm to 960 mm (26" to 37.8")

Electrical Requirements		Pressure	
8	220-240 V AC, 50/60Hz, 1Ø	N3	Process zone: - 125 Pa Pass-through zone: - 75 Pa
9	110-120 V AC, 50/60Hz, 1Ø		<i>For units with integrated exhaust blower module, if a higher negative pressure is needed to meet other local BSL standards, the unit must be linked to external blower or building exhaust.</i>

Upon ordering, input material of construction at the end of the model code: SCI-2GC\_-N3SL-III-SS or -EG

••- SS: Full stainless steel exterior

•• -EG: Electrogalvanized steel with ISOCIDE™ coating

## GENERAL SPECIFICATIONS

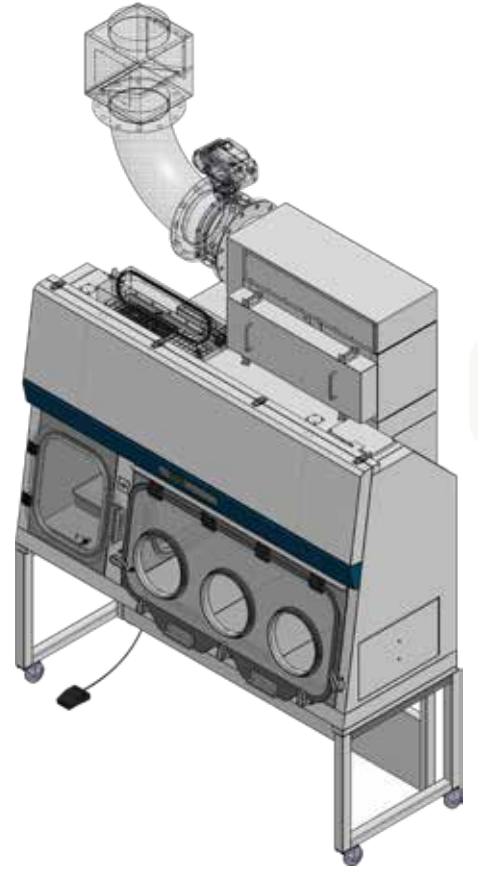
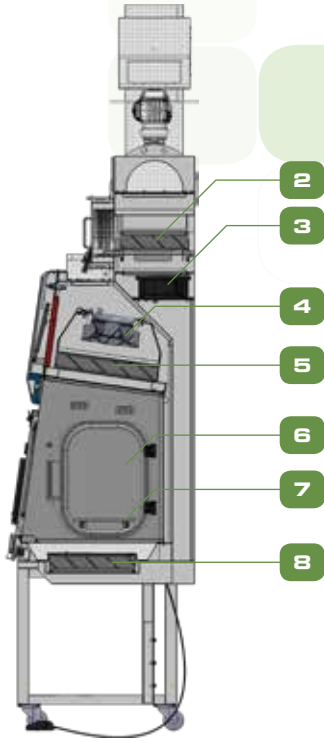
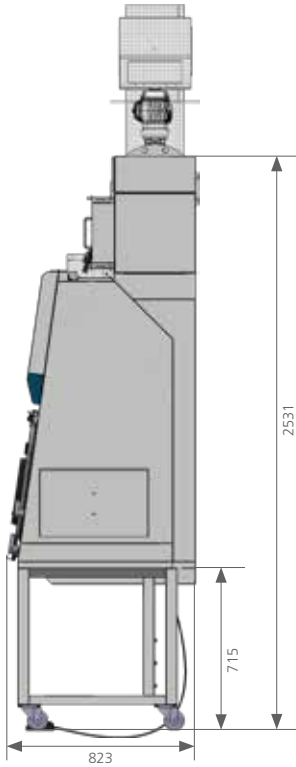
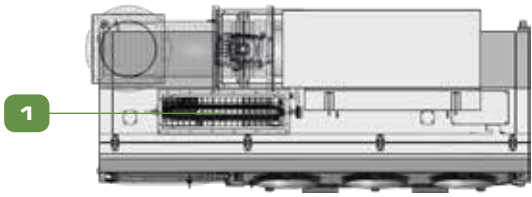
### Streamline® Containment Isolator Class III

		SCI-2G_-	SCI-3G_-		
Main Chamber Nominal Size (Width)		1.6 meters (5')		1.95 meters (6')	
External Dimension (L x W x H)		1645 x 823 x 2516 mm (64.8" x 32.4" x 99.0")		1950 x 823 x 2516 mm (76.8" x 32.4" x 99.0")	
Main Chamber Work Zone (W x D x H)		965 x 621 x 614 mm (38" x 24.4" x 24.2")		1270 x 621 x 614 mm (50" x 24.4" x 24.2")	
Pass Through (W x D x H)		453 x 621 x 614 mm (17" x 24.4" x 24.2")		453 x 621 x 614 mm (17" x 24.4" x 24.2")	
Work Zone and Interchange Chamber Performance		ISO Class 3 (at rest), ISO Class 5 (in operation)			
Downflow and Exhaust Filter Type		H14 filters with integral metal guards and filter frame gaskets; fully compliant with EN 1822 (H14) and IEST-RP-CC001.3 requirements (each cabinet has individual downflow and exhaust filters)			
Typical Filter Efficiency		>99.999% for particle size between 0.1 to 0.3 micron			
With Ducting and External Exhaust Fan	Pressure	Main Chamber: -37 Pa (Min) Pass-Through Chamber: -25 Pa (Min)	Main Chamber: -125 Pa (Min) Pass-Through Chamber: -75 Pa (Min)	Main Chamber: -37 Pa (Min) Pass-Through Chamber: -25 Pa (Min)	Main Chamber: -125 Pa (Min) Pass-Through Chamber: -75 Pa (Min)
	Downflow Velocity	0.40 m/s (±20%)	0.40 m/s (±20%)	0.40 m/s (±20%)	0.35 m/s (±20%)
	Exhaust Volume/ Pressure Drop	1385cmh / 680 Pa	1385 cmh / 840 Pa	1800 cmh / 830 Pa	1800 cmh / 880 Pa
	Noise level	≤ 67			
With Integrated Exhaust Blower Module (Bigger Blower)	Pressure	Main Chamber: -37Pa (Min) Pass-Through Chamber: -25 Pa (Min)	Main Chamber: -125 Pa (Min) Pass-Through Chamber: -75 Pa (Min)	Main Chamber: -37 Pa (Min) Pass-Through Chamber: -25 Pa (Min)	Main Chamber: -125 Pa (Min) Pass-Through Chamber: -75 Pa (Min)
	Downflow Velocity	0.20 m/s (+/-20%)			
	Noise level	≤ 67			
Typical Filter Efficiency		>99.999% for particle size between 0.1 to 0.3 micron			
Fluorescent Lamp Intensity		≥ 800 lux			
Isolator Construction	Main Body EG Steel	1.5 mm (0.06") 16 Gauge Electro-Galvanized Steel with White Oven-Baked Epoxy-Polyester Isocide Antimicrobial Powder Coated Finish			
	Main Body Stainless Steel	1.5 mm (0.06") 16 gauge stainless steel, type 304, with 4B finish			
	Work Tray	1.5 mm (0.06") 16 gauge stainless steel, type 316L, with 4B finish			
	Side Walls	1.5 mm (0.06") 16 gauge stainless steel, type 316L, with 4B finish			
Electrical	220-240V, AC, 50/60Hz, 1Ø	SCI-2G-		SCI-3G-	
	Cabinet Full Load Amp (FLA)	4.5 A		6.0 A	
	Optional Outlets FLA	5.0 A		5.0 A	
	Cabinet Nominal Power	440 W		500 W	
	Maximum Power	700 W		700 W	
	Cabinet BTU	1501 W		1706 W	
Net Weight		490 kg (1080.27 lbs)		620 kg (1366.87 lbs)	
Shipping Weight		525 kg (1157.43 lbs)		660 kg (1455.05 lbs)	
Shipping Dimensions, Maximum (W x D x H)		1720 x 900 x 2440 mm (67.7" x 35.4" x 96")		2200 x 960 x 2560 mm (86.6" x 37.8" x 100.8")	
Shipping Volume, Maximum*		3.77 m <sup>3</sup> (133.1 ft <sup>3</sup> )		5.40 m <sup>3</sup> (190.7 ft <sup>3</sup> )	
Optional Accessories	UV Lamp	5170543		5170543	
	CCTV Camera	5180034		5180034	
	Rear View	5180033		5180033	

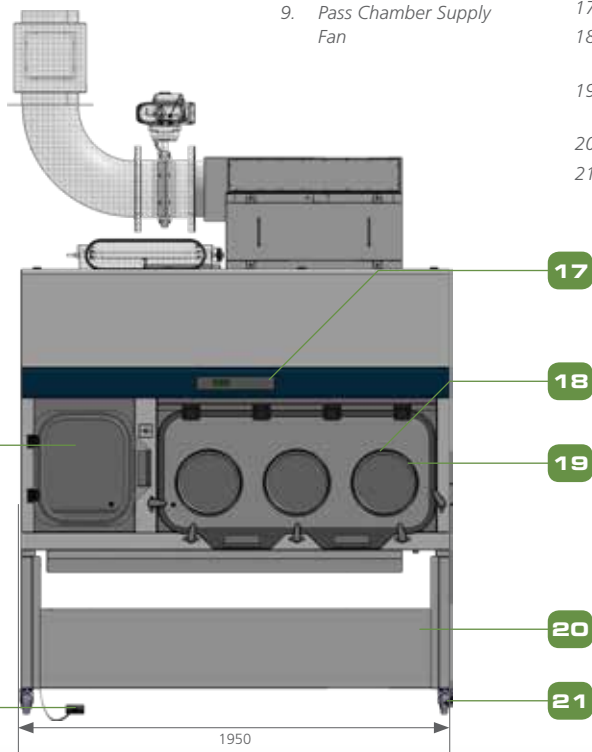
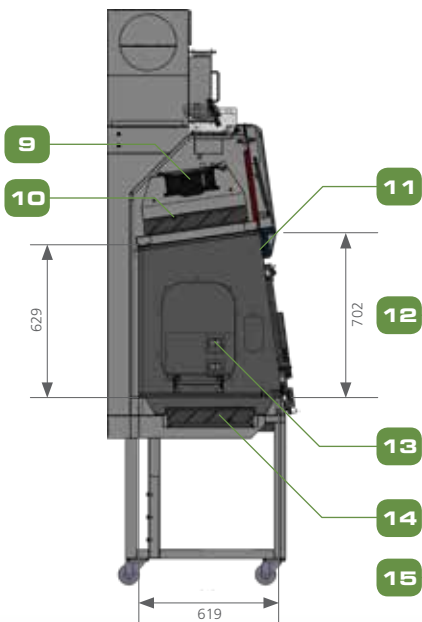
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# ENGINEERING DRAWING

SCI TOTAL EXHAUST Model SCI-2GC\_-N3SL-III

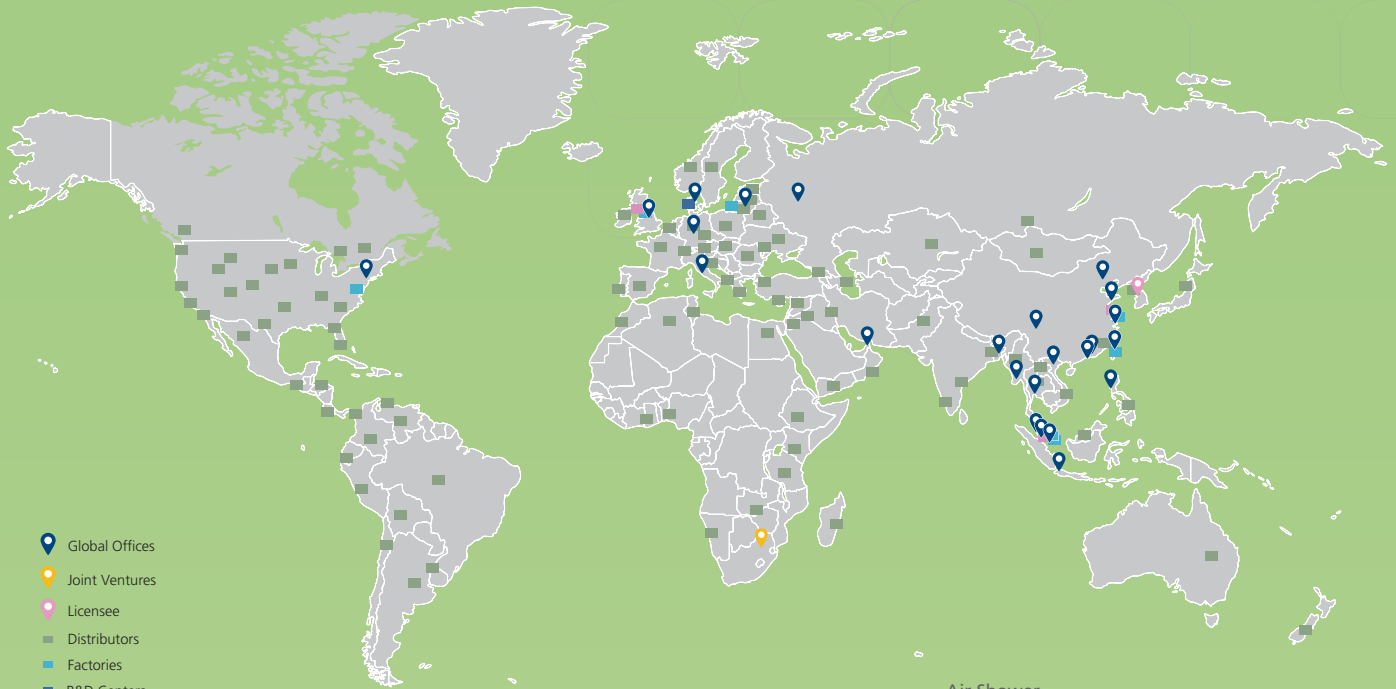


- 1. Air Inlet Pre-Filter
- 2. 2nd Exhaust HEPA Filter, Bag-In Bag-Out (BIBO)
- 3. Exhaust Fan
- 4. Supply Fan
- 5. Supply HEPA Filter
- 6. Pass Chamber Inner Door
- 7. Pass Chamber Sliding Tray
- 8. 1st Exhaust HEPA Filter
- 9. Pass Chamber Supply Fan
- 10. Pass Chamber Supply HEPA Filter
- 11. LED Light
- 12. Pass Chamber Outer Door
- 13. Electrical Outlet (Optional)
- 14. Pass Chamber Exhaust Filter
- 15. Inner Door Foot Switch
- 16. Exhaust Collar
- 17. Esco Sentinel Control
- 18. Round Glove Ports, ø300mm
- 19. Main Chamber Polycarbonate Window
- 20. Support Stand
- 21. Castor Wheel



# ESCO GLOBAL NETWORK

42 Locations In 21 Countries All Over The World



- Global Offices
- Joint Ventures
- Licensee
- Distributors
- Factories
- R&D Centers
- Regional Distribution Centers



- Air Shower
- Aseptic Containment Isolator (ACTI)
- Ceiling Laminar Airflow Units
- Cleanroom Transfer Hatch
- Containment Barrier Isolator (CBI)
- Downflow Booth (DFB)
- Dynamic Floor Label Hatch
- Dynamic Pass Box
- Evidence Drying Cabinet
- Garment Storage Cabinet
- General Processing Platform Isolator (GPPI)
- Laminar Flow Horizontal Trolley
- Laminar Flow Straddle Units, Single and Double
- Laminar Flow Vertical Trolley
- Pass Box
- Soft Wall Cleanroom
- Sputum Booth
- Ventilated Balance Enclosure (VBE)
- Weighing and Dispensing Containment Isolator (WDCI)

Since 1978, Esco has emerged as a leader in the development of controlled environment, laboratory and pharmaceutical equipment solutions. Products sold in more than 100 countries include biological safety cabinets, fume hoods, ductless fume hoods, laminar flow clean benches, animal containment workstations, cytotoxic cabinets, hospital pharmacy isolators, and PCR cabinets and instrumentation. With the most extensive product line in the industry, Esco has passed more tests, in more languages, for more certifications, throughout more countries than any biosafety cabinet manufacturer in the world. Esco remains dedicated to delivering innovative solutions for the clinical, life science, research and industrial laboratory community. [www.escoglobal.com](http://www.escoglobal.com).



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