BioBooth™

Protecting Your Research Equipment from Medium to Large-Scale

Introduction

Esco's BioBooth™ is similar to a Biological Safety Cabinet Class II which can provide an ISO Class 5 work environment to house relatively larger research devices, apparatus, equipment, machineries and operating robotics under appropriate controlled cleanroom conditions. The BioBooth™ utilizes airflow design mechanism which allows adequate control on the inflow and exhaust of air, ensuring operator, product, and environmental protection.

Key Features

- ISO Class 5 air cleanliness as per ISO 14644-1
- HEPA (H14) filter as per EN 1822 with a typical efficiency of >99.999% at 0.1 to 0.3 microns
- Electronic Door Lock
- Electrogalvanized steel finish with ISOCIDE™ antimicrobial coating construction
- Esco Sentinel™ Gold Microprocessor Controller
- Stainless steel worktop with caster wheels
- Stainless steel easy-to-clean interior work surfaces
- Side door access and ports for caps and bottle entry
- Viewing hinged window
- Permanently lubricated direct drive centrifugal blowers
- Decontamination Port
- Front air capture and rear grilles
- Airflow sensor
- Filter life display
- Monitoring system of airflow and proper enclosure conditions
- Audible alarms
- UV Lamp
- LED lighting
- Electrical Ports
- Reinforced base with ramp to facilitate wheeled-cart transfers

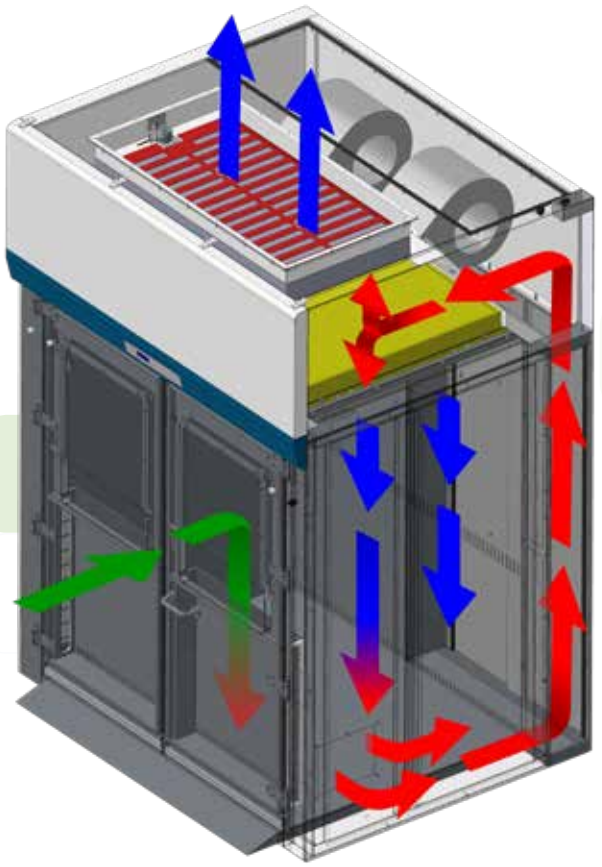
	Design	Cabinet Performance	Air Cleanliness	Electrical Safety
Standard Compliance	NSF/ANSI:49, ISO 9001, ISO 14001	CETA CAG-002-2006	ISO 14644-1:2015 Class 5, IEST-RP-CC001.3, EN 1822,	EN 61010-1:2010, EN 61326-1:2013 Class B

For the client's safety guarantee, the Esco BioBooth™ underwent a series of microbiological tests based on the international standards of NSF ANSI 49 and EN 12469:2000

- **Personnel Protection Test:** It utilized KI Discus based on the international standard of EN 12469:2000. The test ensures that the operator, working with appropriate distance from the front opening, will be safe against potential hazardous samples processed inside the booth as it resulted with an Apf number ≥ 1.5 x 10^5.
- **Product Protection Test:** BioBooth™ complied with the NSF/ANSI 49 standard. This test guaranteed product protection from outside factors due to the strength of the unit's airflow curtain.
- **Cross-contamination Test:** This is also under the NSF/ANSI 49 standards wherein the unit proved to prevent the risk of cross-contamination from either side of the booth's opening.

Filtration System

- Ambient air is pulled through the perforations located in front of the work zone front to prevent contamination of the work surface and product. The inflow does not mix with the clean air within the cabinet work zone. Inflow air travels through a return path toward the common air plenum (blower plenum) at the top of the cabinet.
- Approximately 37% of the air in the common plenum is exhausted through the HEPA filter to the room. The remaining 63% of the air is passed through the downflow HEPA filter and into the work area as a vertical laminar flow air stream, bathing the work surface in clean air.
- The uniform, laminar/unidirectional air stream protects against cross-contamination within and throughout the work area.
- Near the work surface, the downflow air stream splits with a portion moving toward the front air grille, and the remainder moving to the air grilles located on both sides of the booth. Air passing through these air grilles will travel to the negatively pressured Dynamic Chamber™ side plenum and flow towards the HEPA filters on top of the unit. This design prevents contamination of the processes inside the booth.
- A combination of inflow and downflow air streams form an air barrier that prevents contaminated room air from entering the booth, and prevents work surface emissions from escaping the work zone. Air returns to the common air plenum where the 37% exhaust and 63% recirculation process is continued.



Room air / Ambient air | Filtered air | Unfiltered / Potentially contaminated air

Warranty

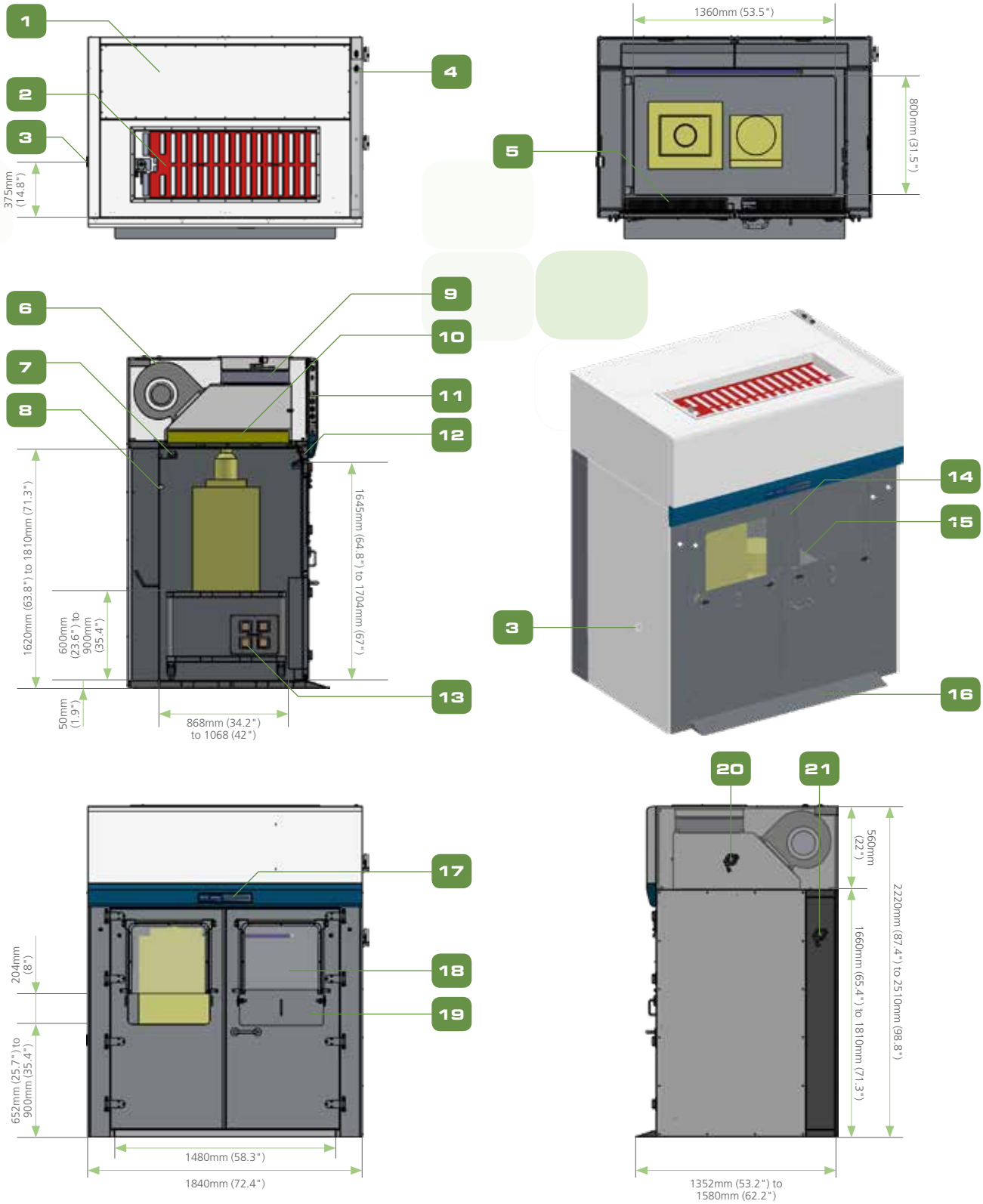
1 year warranty excluding consumables parts and accessories.

During the period of warranty, any repair, modification, testing and commissioning performed by any unauthorized party other than Esco Service Team shall void the warranty of the unit.

GENERAL SPECIFICATIONS

Model	BioBooth™	
External Dimensions (WxDxH)	1840mm x 1580mm x 2510mm (72.4" x 62.2" x 98.8")	1840mm X 1352mm X 2220mm (72.4" x 53.2" x 87.4")
Internal Work Area, Dimensions (WxDxH)	1480mm x 1068mm x 1810mm (58.3" x 42" x 71.3")	1480mm x 868mm x 1570 mm (58.3" x 34.2" x 61.8")
External Construction	Electrogalvanized steel with white oven-baked epoxy-polyester ISOCIDE™ antimicrobial powder-coated finish, 1.5 mm (0.06") / 16 gauge thick	
Internal Construction	Stainless steel Type 304 with No.4 finish, 1.5 mm (0.06") / 16 gauge thick	
Downflow Velocity	0.30 m/s ± 20%	
Inflow Velocity	0.5 m/s	

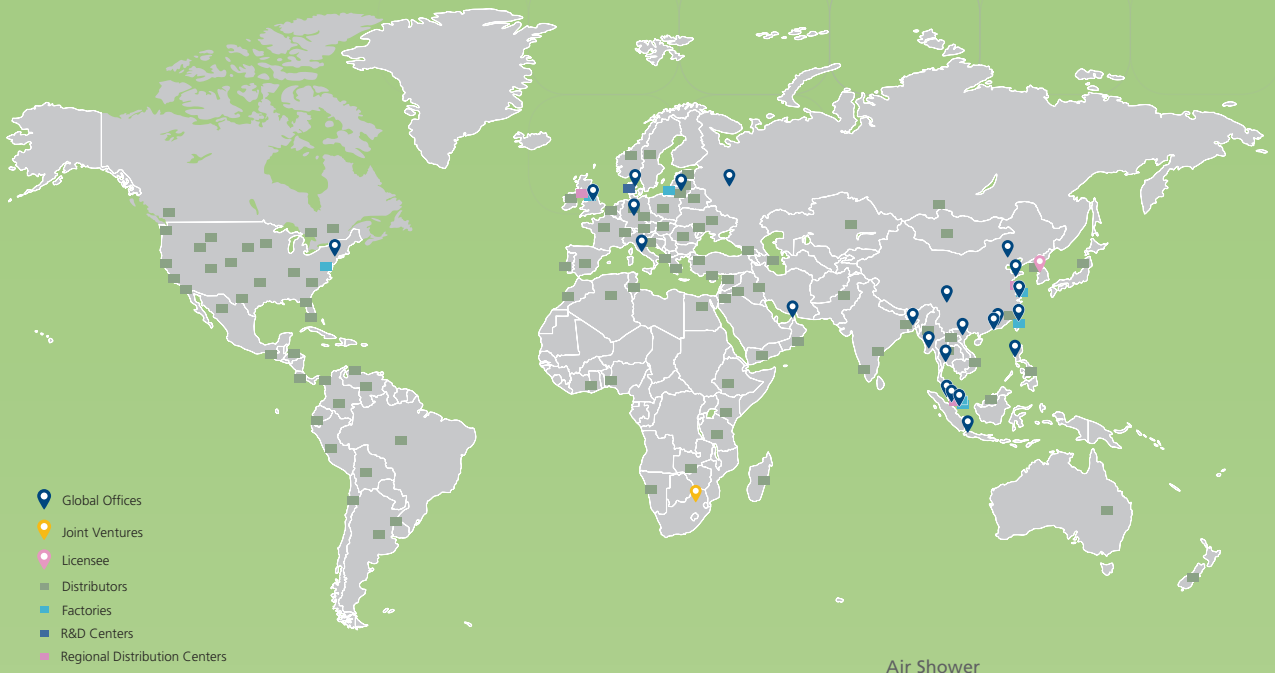
BIOBOOTH™ ENGINEERING DRAWING



1. *Fan Access Cover*
2. *Exhaust Damper*
3. *Roxtec Cable Seal (For Cable Entry)*
4. *IEC Power Inlet, 2 X 13 Amps*
5. *Front Air Capture Grille*
6. *Fan*
7. *Airflow Sensor*
8. *UV Lamp*
9. *Exhaust HEPA Filter, H14*
10. *Electrical Panel*
11. *Supply HEPA Filter, H14*
12. *LED Light*
13. *Electrical Outlets, 4 Nos.*
14. *Electronic Door Lock*
15. *Stainless Steel Table*
16. *Reinforced Base with Ramp*
17. *Esco Sentinel Microprocessor Control*
18. *Viewing Hinged Window*
19. *Removable UV Cover*
20. *Decontamination Port (In)*
21. *Decontamination Port (Out)*

ESCO GLOBAL NETWORK

42 Locations In 21 Countries All Over The World



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.

ESCO® PHARMA

Esco Pharma
21 Changi South Street 1 Singapore 486777 • Tel: +65 65420833
Fax: +65 65426920 • Email: csis.pharma@escoglobal.com

Esco Technologies, Inc.
2512 Metropolitan Drive, Suite 120 B
Feasterville- Trevose, PA 19053-6738
Tel: 215 322 2155 • Email: eti.pharma@escoglobal.com

Esco Gb Ltd
Unit 2 R-evolution @ Gateway 36, Kestrel Way, Barnsley, S70 5SZ
Tel: +44 (0) 1226 360 799 • Email: egb.pharma@escoglobal.com

Esco Global Offices: Bangladesh | Cameroon | China | Denmark | Germany | Hong Kong | Indonesia | Italy | Lithuania | Malaysia | Myanmar | Philippines | Russia | Singapore | South Africa | South Korea | Taiwan | Thailand | UAE | UK | USA | Vietnam

escoglobal.com LIVE SUPPORT | ISOCIDE™

Influential Brands' TOP EMPLOYER 2018

bioSAFE

Esco Micro Pte Ltd Certificate No: 651076
PT. Esco Bintan Indonesia Certificate No: 651333/Q
PT. Esco Bintan Indonesia Certificate No: 651333/E
PT Esco Bintan Indonesia EN ISO 13485: 2016
PT Esco Bintan Indonesia ISO 13485: 2016

Biobooth_Sellsheet_ A4_vA_04302020
Esco can accept no responsibility for possible errors in catalogues, brochures and other printed materials. Esco reserves the right to alter its products and specifications without notice. All trademarks and logotypes in this material are the property of Esco and the respective companies.