



Infectious Disease Diagnostic Sampling Booth™ (IDDSB™)

Ensuring Personnel & Environment protection from secondary and tertiary infection by a validated containment system to reduce droplet nuclei

Introduction

Esco's Infectious Disease Diagnostic Sampling Booth™ (IDDSB™) controls exposure risk to harmful aerosols/airborne diseases by providing containment using airflow to capture and exhaust out aerosols from sputum expectoration, handling, sampling, or swabbing of asymptomatic carriers, patients under investigation that have some form of COVID-19 symptoms which are borderline to other infectious diseases, COVID-19 positive patients. The booth provides both operator/patient and environmental protection.

Four (4) IDDSB™ units can come in a 20ft container equipped with a BSL laboratory inside for integrated swabbing and storage of samples. These can work in conjunction with Severe Acute Respiratory Infection (SARI) - Treatment Centers or other solutions like mobile diagnostic laboratories, and other containment facilities.

Key Features:

- ISO Class 5 air cleanliness (as per ISO 14644-1)
- Inflatable Sealed doors
 - with on-board compressor
- Negative pressure keeps aerosol contained in booth with options for:
 - Single Pass booth
- Pressure-tested
- Manual glove leak tester (GLT)
- CCTV Mount
- Shelves:
 - Inside the booth
 - Outside the booth
- Closed Bag-out port for collecting Diagnostic samples
- Intercom

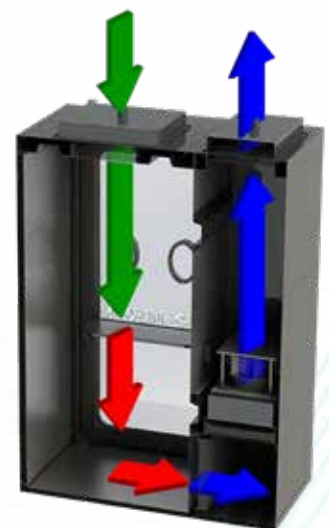
- LED lighting
- UV Lamp for overnight internal environment disinfection
 - * operators may choose to validate as well if UV-C lighting can provide a way to disinfect PPE for reuse; operators to develop own protocols.*
- Sound and Light alarms
- Optional Esco Mobile BioVap™ or Esco BioAtom Disinfection Gun
- Optional Esco Misting Personnel Disinfectant Booth
- Optional handheld heat sealer for sealing diagnostic samples
- Ergonomic glove port system for swabbing test

Material of Construction

- Infectious Disease Diagnostic Sampling Booth (IDDSB) can be made of:
 - External ElectroGalvanized powder coated steel with internal SS 316L
 - *Not pressure tested to BSL3, only carcass is pressure tested*
 - Full stainless steel unit with external SS 304 and internal SS 316L construction

Filtration System

- Room air is taken from the top of the booth through a G4 pre-filter, resulting to containment by air entrainment which will entrain droplet nuclei and sweep it below the personnel breathing zone.
- Air will then be pulled downwards to the two HEPA (H14) exhaust filters located at the side of the unit before purging it all through the carbon filter located at the top of the booth.



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

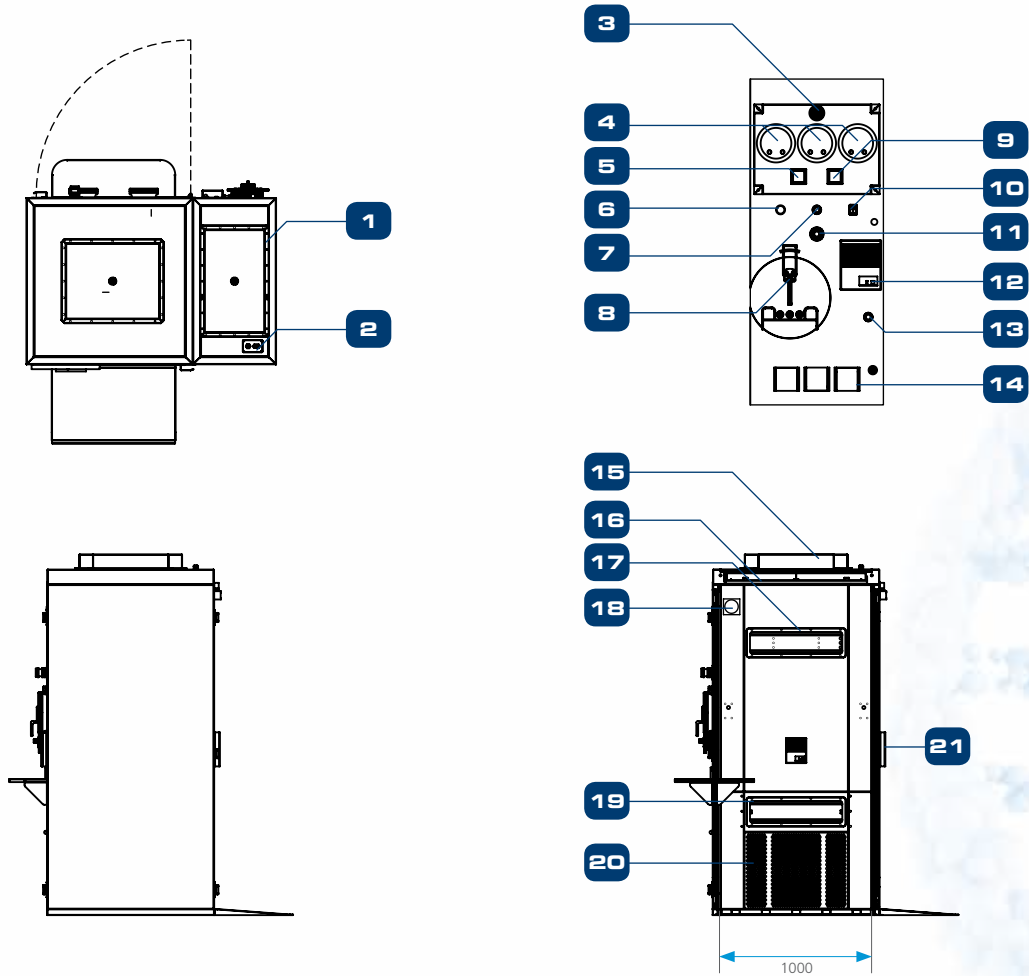
Filtration Package

- Pre-Filter: A disposable G4 pre-filter with 85% arrestance and efficiency of 20% extends the life of the main filter.
- Pre-exhaust Filter: Two HEPA (H14) filters and one carbon filter providing 99.999% filtration efficiency against 0.3micron sized particles.

Warranty

1 year warranty (excluding consumables). Consumables are ballast, LED, and filters. The warranty will cover all other parts including the blower, speed controller, electrical main board, and microprocessor.

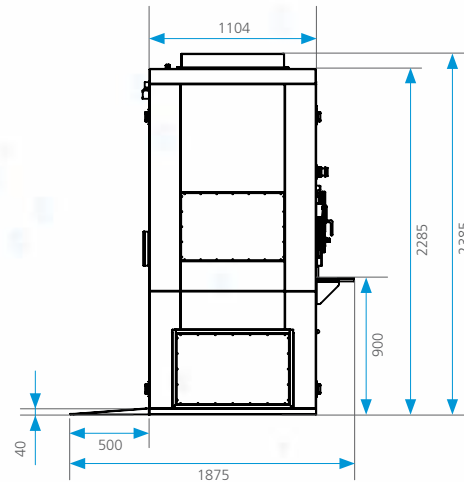
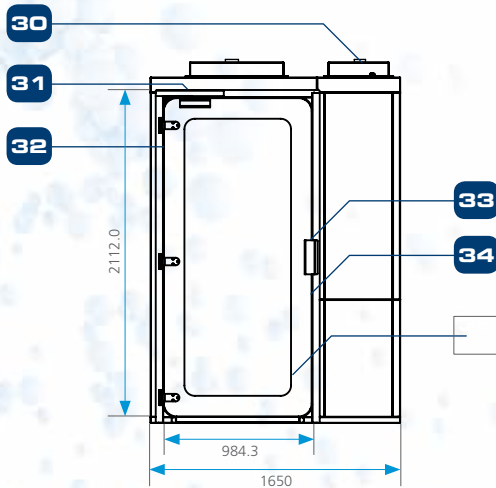
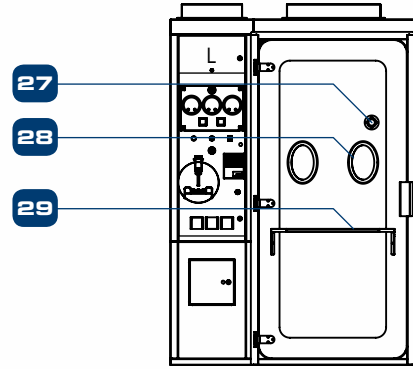
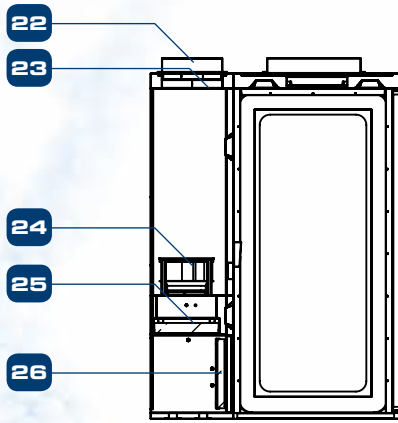
During the period of warranty, any repair, modification, testing and commissioning performed by any unauthorized party other than Esco Service Team shall void the warranty of the unit.



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IDDSB - 1P1O

Model		Booth Variants	Material of Construction	Room Size	Usage	Voltage
IDDSB	-	1 Single - Stand-alone: polyclinics, secondary and tertiary hospitals	P External: Powder coated steel Internal: SS316L	1 External Height: 2.3m	I Indoors	1 220-240V, AC, 50
		2 Double - Width fits into mobile laboratories	S External: SS304 Internal: SS316L	2 External Height: 1.95m	O Outdoors	2 110-130V, AC, 60
		3 Triple - Mass screening fits into 10ft container		3 External Dimensions: Bigger		3 220-240V, AC, 60
						7 100VAC, 50/60
						8 220-240VAC, 50
						9 110-130VAC, 60



- | | | | |
|---|---|---|--|
| 1. Decontamination Hood | 8. Glove Leak Tester | 18. CCTV Provision
*Client to procure own CCTV | 29. Stainless Steel Shelving
(Outside and Inside) |
| 2. 20 Amp Isolator | 9. Purging Timer | 19. UV Lamp | 30. Supply and outlet ports to
Esco BioVap or client existing
mobile biodecon system |
| 3. Light And Sound Alarm | 10. Light & Blower Switch | 20. Exhaust Grille | 31. Door Closer w/ Slider |
| 4. Photohelic Gauges:
1st Stage Exhaust Filter | 11. Door Open Panic Button | 21. U-Shape SS Door Handle | 32. Healthworker Side Door
(Emergency) |
| 2nd Stage Exhaust Filter | 12. Intercom | 22. Hood For Decontamination | 33. Door Handle |
| Chamber Pressure Gauge | 13. Door Seal Deflate (Patient
Door) | 23. Carbon Filter | 34. Inflatable Seal Doors |
| 5. UV Countdown Timer | 14. 3X Electrical Outlet | 24. Centrifugal Blower | 35. Polycarbonate Door Visors |
| 6. UV Switch with interlock
(when doors are open UV
light switches off) | 15. G4 Pre-Filter | 25. H14 Filter 2nd Stage Exhaust | |
| 7. UV Indicator Orange Light
Push Button | 16. Diffuser | 26. H14 Filter 1st Stage Exhaust | |
| | 17. LED Lamp | 27. Bag Liner For Specimen | |
| | | 28. Glove Ports For Swabbing | |

SAMPLING BOOTH NOMENCLATURE

__ - 3 __ M - B - C

		Glove Port Position	Pressure Decay Testing	Personal Misting	Biovap Option	Customization
Hz, 1Ø	1	Sitting	A For external powder coated only carcass is pressure decay tested in factory.	M Yes	B With Biovap Nozzles Non-Integrated unit	NIL Standard
Hz, 1Ø	2	1.65 average height	B For full SS booth - tested to BSL 3 standards	N None	I With Biovap Nozzles Integrated unit	C Customized
Hz, 1Ø	3	1.80 average height			N Without Biovap Nozzles	
ØHz	4	Sitting - wheelchair - 1.65 average height (4gloveports)				
/60Hz	5	Sitting - wheelchair - 1.80 average height (4gloveports)				
0Hz						



Four (4) Infectious Disease Diagnostic Sampling Booth™ (IDDSB™) units in 20ft containers equipped with a fully integrated BSL laboratory inside for swabbing and storage of diagnostic samples.



Esco is committed to flatten the curve of the COVID-19 pandemic through its 'trace, test, and treat' platform which promotes worldwide eradication of the virus.

In its trace stage, Esco designed and created two COVID-19 booths: **Infectious Disease Diagnostic Sampling Booth™ (IDDSB™)** and the **Mass Screening Swab Booth™ (MSSB™)**. The IDDSB™ is a pressure-tested booth that can be integrated with a hydrogen peroxide biodecontamination system for the main

purpose of mass testing symptomatic person under investigation (PUI) and person under monitoring (PUM) with COVID-19 like symptoms, it can also be used for repeat testing of COVID-19 positive patients, including sputum/lavage (saliva), thus ensuring protection of the HCW and the environment. On the other-hand, MSSB™ is a non-pressure decay tested booth designed to diagnose asymptomatic person under investigation (PUI) and person under monitoring (PUM) in a short span of time while eliminating the risk of front-liners contracting the virus.

With the booths' programmed pressurization (MSSB™: +ve for HCW and -ve for PUI booth; and for IDDSB™: -ve), strict airflow regime, and partnered with stringent SOPs, Esco guarantees a safe and efficient mass testing in each community to trace and diagnose all asymptomatic carriers and Person Under Investigation with COVID-19 like symptoms, to prevent further spread of the virus.

GENERAL SPECIFICATION

Model		Infectious Disease Diagnostic Sampling Booth
Nominal Size		1650 mm
External Dimension (W x D x H)		1650 x 1875 x 2385 mm
Internal Work Area Dimension (W x D x H)		984.3 x 1000 x 2145mm
Cabinet Construction	Main Body	Stainless Steel Grade 316 L / Electrogalvanized steel coated with ISOCIDE™ antimicrobial coating Sheetmetal
	Floor	Stainless Steel Grade 316 L / SS304
	Door	Stainless Steel Grade 316 L / Electrogalvanized steel coated with ISOCIDE™ antimicrobial coating Sheetmetal
Power Consumption		Contact Esco for more information
Cabinet Full Load Amps (FLA)		Contact Esco for more information
LED Lamp Intensity		Contact Esco for more information
Net Weight		Contact Esco for more information
Shipping Weight		Contact Esco for more information
Shipping Dimension, Maximum (W x D x H)		Contact Esco for more information



Esco Aster Pte. Ltd.

#02-09 Block 67 Ayer Rajah Crescent
Singapore 139950 • Tel +65 6251 9361
mail@escoaster.com • www.escoaster.com

Esco Micro Pte. Ltd.

21 Changi South Street 1, Singapore 486777
Tel +65 6542 0833 • Fax +65 6542 6920
mail@escoglobal.com • www.escoglobal.com



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