



**ESCO**  
WORLD CLASS. WORLDWIDE.



# Mobile Diagnostic Test and Research Labs

Esco's Turnkey Medical Solutions That Can Be Rapidly  
Deployed To Help Fight The Virus Threat.





## Introduction

Esco mobile diagnostic test laboratory and research solutions are designed for virus infected areas where specialized laboratory mechanical contractors are not present.

This turnkey services makes the diagnostic unit easy to deploy in situations where the medical provider desires to cover large areas and in situations where mobility of health services is desirable (through shifting demand).

Esco believes it can contribute with its medical solutions to combat the virus outbreak.

## Mobile Diagnostic Test Lab for Infectious Diseases

Esco provides turnkey mobile medical solutions to international community to help prevent further spread of infectious diseases such as Corona Virus. We ensure availability of stocks – as outbreaks have no breaks, and so do we!



*Evaluating and Testing Persons Under Investigation for Corona Virus*

## Inside Mobile Diagnostic Test Lab

PCR workflow for SARS-CoV-2 diagnosis would typically involve RNA extraction, mastermix preparation, and amplification. Diagnostics for SARS-CoV-2 should be conducted in a Biosafety Level 2 (BSL-2) laboratory, according to guidelines set by the Centers for Disease Control and Prevention (CDC). Esco offers range of quality products for laboratories handling SARS-CoV-2 diagnostics.

### Nucleic Acid Extraction



*Airstream® Biosafety Cabinet*



*Provocell™ Microplate shaker*



*Versati™ Microcentrifuge*

### Mastermix Preparation



*Airstream® PCR Cabinet*

### Amplification



*Aeris™ Thermal Cycler*



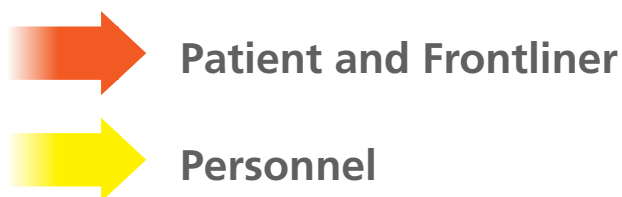
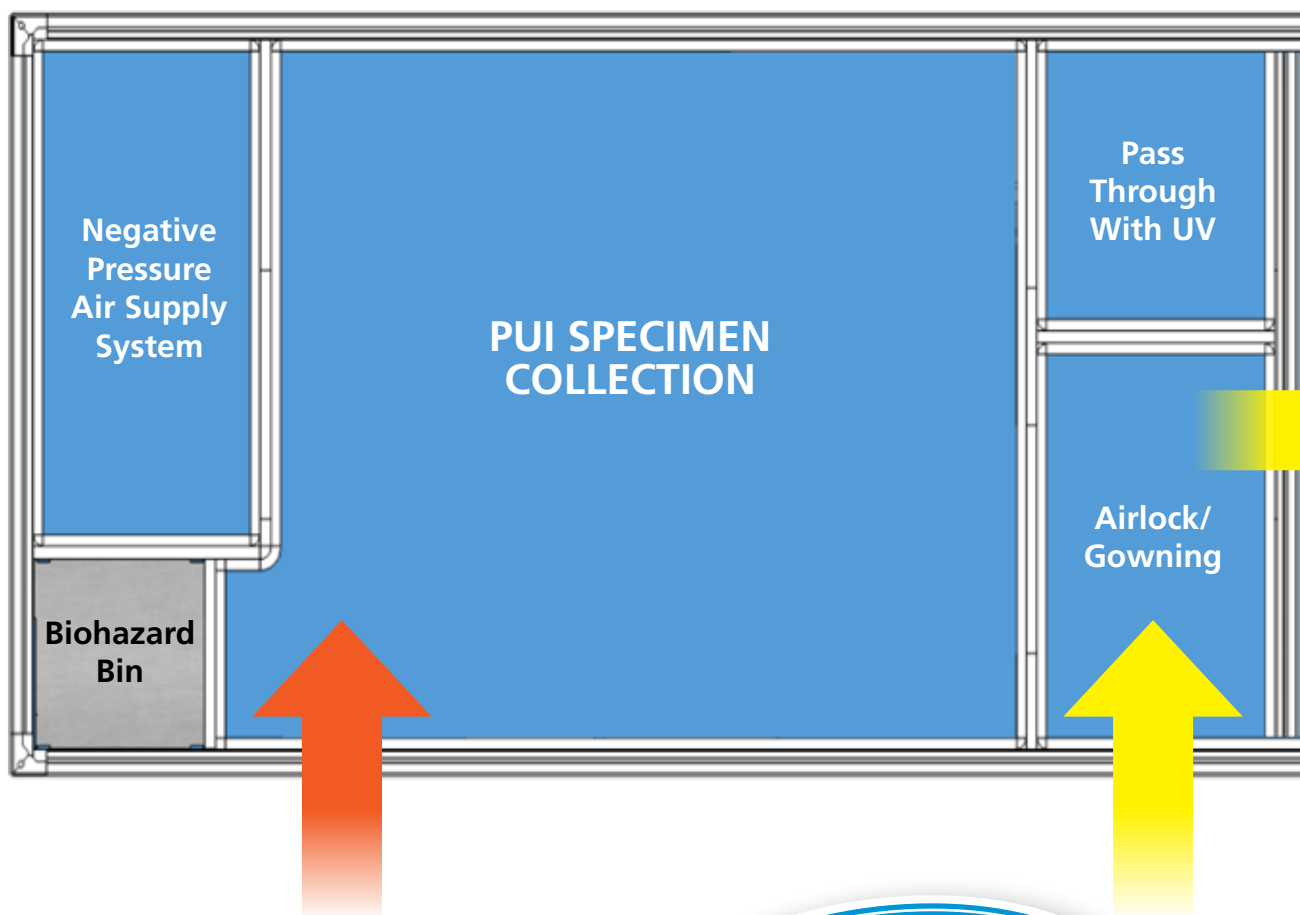
*Swift® MiniPro™ Thermal Cycler*



## Inside Mobile Diagnostic Test Lab - Architectural Layout of BSL 2 Test Lab for Corona Virus



Airstream® Biosafety Cabinet



Mobile. Modular. GMP  
Compliant Design and  
Construction



Provocell™ Microplate shaker



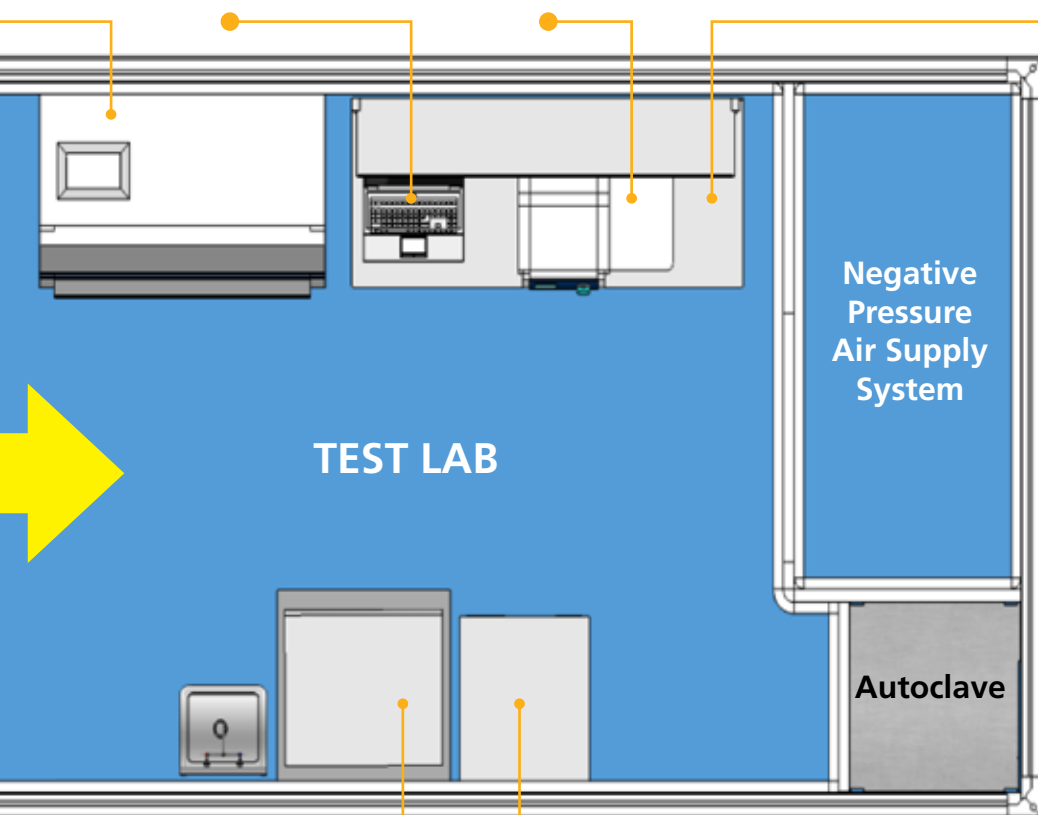
Versati™ Microcentrifuge



Aeris™ Thermal Cycler



Swift® MiniPro™ Thermal Cycler



Airstream® PCR Cabinet



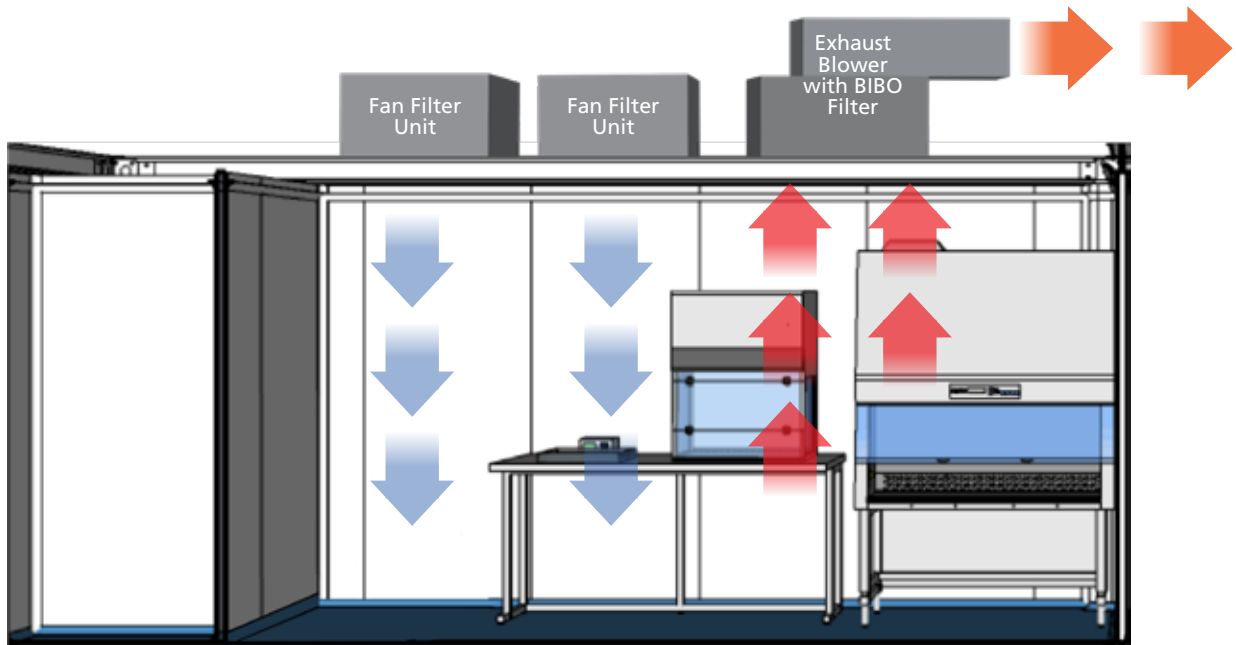
HC6-400S



## Inside Mobile Diagnostic Test Lab - Airflow Layout

**One pass only –no re-circulating air, unidirectional air flow**

- All incoming air HEPA filtered (Fan Filter Unit)
- All main lab and airlock exhaust air pass via first HEPA in main room,
- All exhaust air from BSC pass via first HEPA Filter inside BSC then to the room exhaust air filter out.



## Inside Mobile Diagnostic Test Lab - Room Perspectives





## Mobile BSL 3 Research Laboratory for Infectious Diseases

The COVID-19 crisis asks for medical solutions that can be rapidly deployed and that are of high quality to control the virus and prevent cross-infection. Esco has designed a mobile laboratory to perform viral disease tests in virus affected areas.

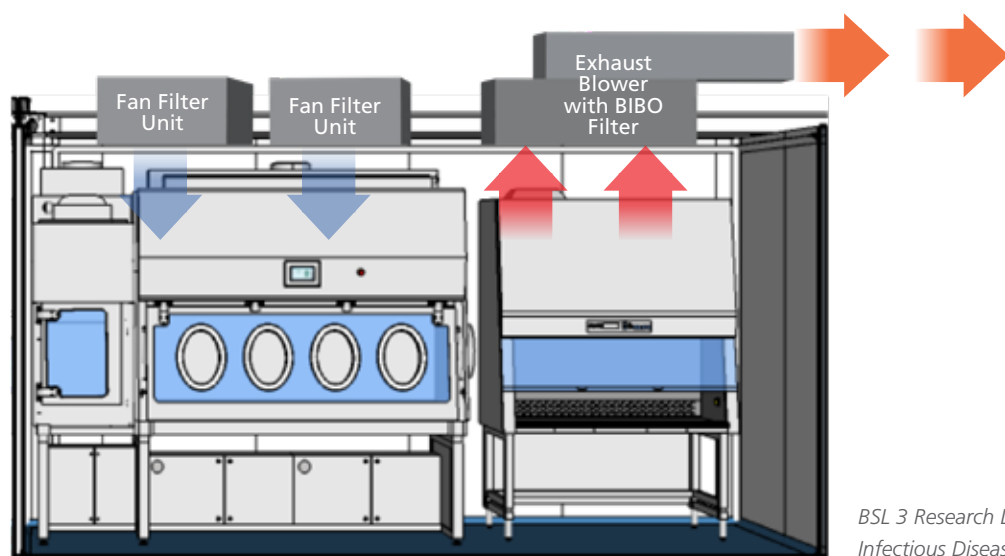
The Esco BSL 3 research laboratory contains an isolator/ Biosafety level 3 cabinet, emergency shower, eye shower, sink, samples refrigerator, sterilizer, PCR Analyzer, laptop, centrifuge and all necessary consumables.



## Inside Mobile BSL 3 Research Laboratory - Airflow Diagram

The COVID-19 crisis asks for medical solutions that can be rapidly deployed and that are of high quality to control the virus and prevent cross-infection. Esco has designed a mobile laboratory to perform viral disease tests in virus affected areas.

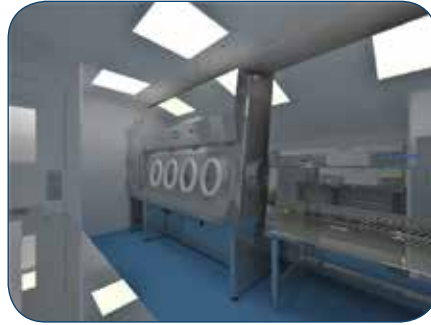
The COVID-19 clinical laboratory contains an isolator/ Biosafety level 3 cabinet, emergency shower, eye shower, sink, samples refrigerator, sterilizer, PCR Analyzer, laptop, centrifuge and all necessary consumables.



*BSL 3 Research Lab for Infectious Disease*



## Inside Mobile BSL 3 Research Laboratory - Perspectives



## Mobile Diagnostic Test and Research Laboratory Turnkey Capability



› Design and Consultation



› Equipment Supply



› Equipment Supply



## Mobile Diagnostic Test and Research Laboratory Materials Specification

Hygienic  
Cleanroom Doors

GMP Compliant Walls  
and Ceiling



Smooth Finish  
Vinyl Flooring





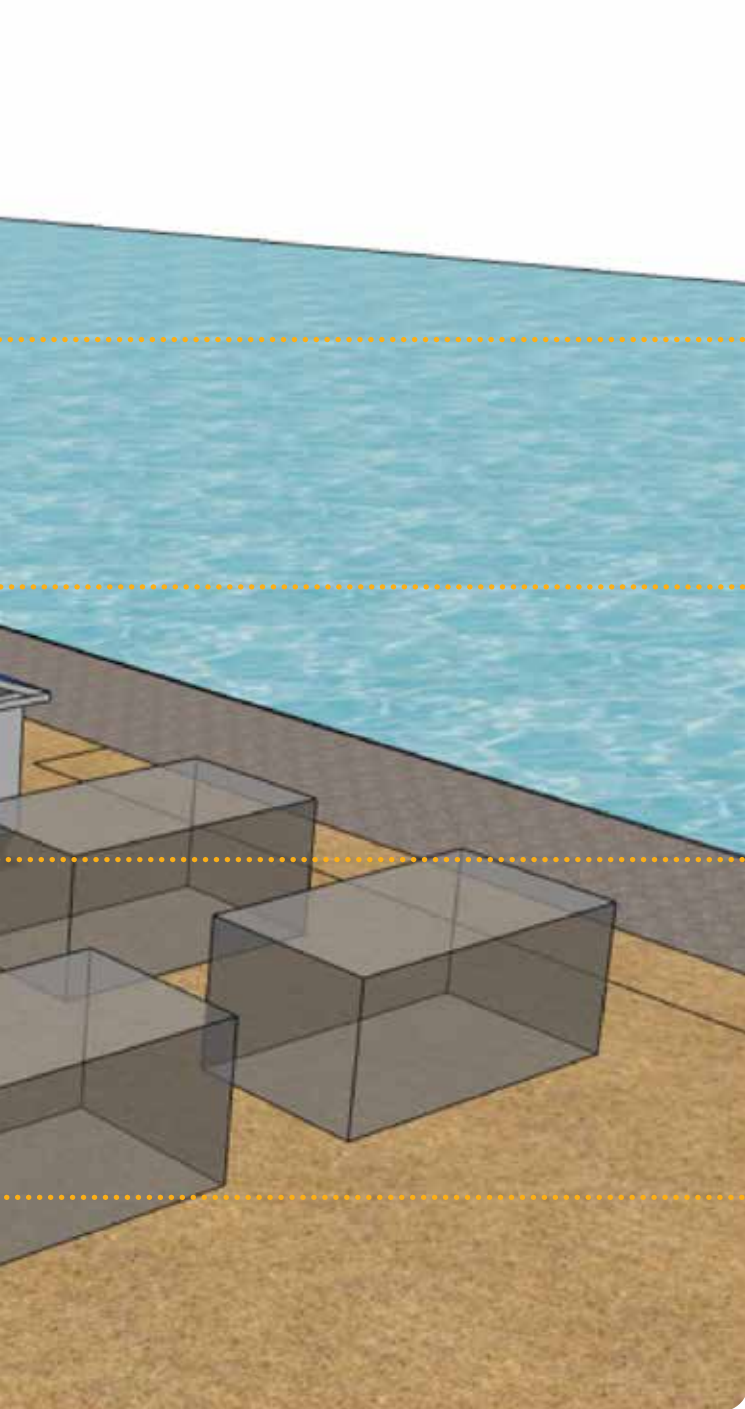
## Mobile Diagnostic Test and Research Laboratory Air Supply Specification

- All rooms – Negative pressure with HEPA filtered air supply and BIBO Filter Exhaust Air
- Room Temperature – 21+- Degree Celsius with 40-60 percent humidity



## Rapid Isolation, Diagnostic Tests and Field Hospital Model Set-up

The expandable 50 bed mobile hospital consist of mobile specimen collection wards and trailers combined with modular test labs and can be rapidly deployed. The complete setup is self supporting. Diesel generators, water storage and filtration and air conditioning is included.



Expandable Hospital

PUI Specimen Collection Wards

Diagnostic Test Labs

Expansion





## Completed Mobile Isolation Facilities



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