



# YOUR PARTNER IN **LABORATORY FURNITURE DESIGN AND SUPPLY**

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A **RANGE OF QUALITY PRODUCTS** AND  
**SERVICES** SUITED TO YOUR NEEDS



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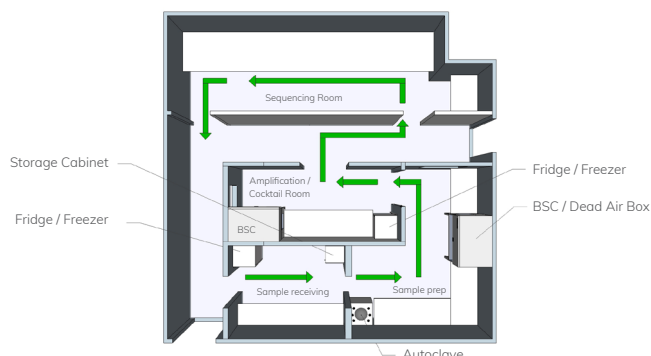
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## CONCEPTUAL DESIGN

Our Lasec® furniture design team is able to design, manufacture and install your furniture project.



- ✓ A custom furniture layout for your workspace
- ✓ Workflow optimization
- ✓ Guidance on instrumentation placement
- ✓ 3D render of laboratory layout
- ✓ Various colours of worksurfaces, frames and cupboards available

**Lasec® is able to design, manufacture and install laboratory furniture in facilities throughout Africa.**

## FURNITURE SUPPLY

Lasec® supplies laboratory furniture and fittings that are designed and manufactured for the laboratory environment.



- ✓ Chemically resistant worksurfaces
- ✓ Specialised laboratory taps, gas and waste fittings
- ✓ Additional safety features and accessories

### ✓ DELIVERY AND INSTALLATION

Our dedicated logistics team will arrange that your furniture is shipped and delivered to your premises, ready for installation and oversight by a Lasec® project manager accompanied by a team of furniture installation specialists.



- Powder coated steel support frames with leveling feet
- Fitted with either a 12mm **FENIX NTM™ SOLID core** or 0.9mm **FENIX NTM™ laminated to a 32mm** substrate
- 100mm high splash back



1000mm L x 750mm D x 900mm H



1500mm L x 750mm D x 900mm H



2000mm L x 750mm D x 900mm H



2500mm L x 750mm D x 900mm H



3000mm L x 750mm D x 900mm H



3500mm L x 750mm D x 900mm H

### FRAME COLOUR OPTIONS



OR



OR



Laboratory  
bench fitted  
with FENIX NTM™



Lasec® laboratory furniture incorporates **FENIX NTM™** as an **innovative material** which stands out above the rest.



### FENIX NTM™ THIN

**Recommended for laboratory offices and schools:**

- 0.9mm FENIX NTM™ on a 32mm substrate
- Cost effective
- Scratch, dry heat and impact resistant



Lasec® laboratory workbench using FENIX NTM™ 12mm SOLID CORE



Lasec® laboratory desk using FENIX NTM™ 0.9mm on a 32mm substrate

### FENIX NTM™ SOLID

**Recommended for demanding laboratory areas:**

- 12mm solid core composed of kraft paper impregnated with thermosetting resins
- High resistance to acid solvents and other chemicals
- Scratch, dry heat and impact resistant
- Enhanced anti-bacterial properties

### OTHER MATERIALS AVAILABLE:

#### TRESPA® TOPLAB®:

High-pressure compact laminate, fabricated with natural fibres and thermosetting resins suited for scientific surface solutions.

#### GRANITE:

As incorporated into antivibration tables for balances to ensure accurate weighing.

### PHYSICAL PROPERTIES OF FENIX NTM™

# FENIX NTM®



High resistance  
to acid solvents  
and chemicals



Resistance to  
dry heat



Resistance to  
impact



Enhanced  
anti-bacterial  
properties



Resistance  
to scratches  
and abrasion



Dimensional  
stability even at  
high temperature  
changes



Hygienic



Suitable for  
contact with  
food



Mold  
resistant



Hydro-repellent



Easy to clean



Thermal healing  
of microscratches



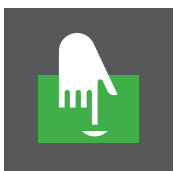
Antistatic



Anti-  
fingerprint



Rub  
resistance



Soft touch



Self-  
supporting  
(only in 10  
and 12 min)



Low light  
reflectivity,  
extremely  
matt surface



Lightfastness



Excellent  
intensity and  
colour depth

**FENIX NTM™** is produced by the simultaneous application of heat (approx. 150°C) and high specific pressure (> 7Mpa) in order to have a homogeneous non-porous high density product. The core structure of FENIX NTM™ is impregnated with thermosetting resins. Its external surface involves the use of nanotechnology and its decor is obtained through next generation resins developed thanks to Arpa Industriale's research. **FENIX NTM™ is suitable for different applications: laboratory workbenches, hospitality, healthcare, bathrooms, furniture** (tables, bookshelves, partitions, chairs, etc.). FENIX NTM™ is a registered trademark by Arpa Industriale.

PROPERTIES	TEST METHOD	PROPERTIES OR ATTRIBUTE	UNIT	VALUES
<b>SURFACE QUALITY</b>				
Surface quality	EN 438-2.4	Spots, dirt and similar surface defects	mm <sup>2</sup> / m <sup>2</sup>	≤ 1
		Fibres, hair and scratches	mm / m <sup>2</sup>	≤ 10

<b>DIMENSIONAL TOLERANCES</b>					
Dimensional tolerances	EN 438-2.5	Thickness tolerance	mm	10,0 ± 0,50 12,0 ± 0,60	10,0 ± 0,70 12,0 ± 0,80
	EN 438-2.6	Length and width	mm	+ 10 / - 0	
	EN 438-2.7	Straightness of edges	mm / m	≤ 1,5	
	EN 438-2.8	Squareness	mm / m	≤ 1,5	
	EN 438-2.9	Flatness (measured on full-size sheet)	mm / m	≤ 3	≤ 5

<b>GENERAL PROPERTIES</b>					
Resistance to surface wear	EN 438-2.10	Initial point	Revolutions	≥ 200	
		Wear value	Revolutions	≥ 350	
Resistance to immersion in boiling water	EN 438-2.12	Mass increase	%	≤ 2,0	≤ 3,0
		Thickness increase	%	≤ 2,0	≤ 4,0
		Appearance	Rating	≥ 4	
Resistance to water vapour	EN 438-2.14	Appearance	Rating	≥ 4	
Resistance to dry heat (180°C / 20')	EN 438-2.16	Appearance	Rating	≥ 4	
Resistance to wet heat (100°)	EN 12721:1997	Appearance	Rating	≥ 4	
Dimensional stability at high temperatures	EN 438-2.17	Cumulative dimensional change	Longitudinal %	≤ 0,20	≤ 0,40
		Cumulative dimensional change	Transversal %	≤ 0,50	≤ 0,70
Resistance to impact with large diameter ball	EN 438-2.21	Drop height	mm	≥ 800	
		Indentation diameter	mm	≤ 8	
Resistance to cracking	EN 438-2.24	Appearance	Rating	≥ 4	
Resistance to scratching	EN 438-2.25	Appearance	Rating	≥ 4	
Resistance to staining	EN 438-2.26	Appearance - Group 1 and 2	Rating	≥ 5	
		Appearance - Group 3	Rating	≥ 4	
Light fastness (Xenon-arc)	EN 438-2.27	Contrast	Grey scale rating	≥ 4	
Resistance to cigarette burns	EN 438-2.30	Appearance	Rating	≥ 3	
Flexural Modulus	EN ISO 178	Stress	Mpa	≥ 9000	
Flexural strength	EN ISO 178	Stress	Mpa	≥ 80	
Surface specular reflectance	ISO 2813	Surface specular reflectance	Gloss unit	Indicative values 0,2 at 20° 1,5 at 60°, 10 at 85°	
Electrostatic property	EN 61340-4-1	Surface electrical resistance	Ω	Values between 1 x 10 <sup>9</sup> and 1 x 10 <sup>12</sup>	
Density	EN ISO 1183	Density	g / cm <sup>3</sup>	≥ 1,35	
Resistance to microscratches	EN 16094	Resistance to micro-scratches	Method A	MSR-A2 solid black MSR-A1 dark printing	
			Method B	MSR-B2 solid black MSR-B1 dark printing	

<b>FIRE PERFORMANCES</b>					
Reaction to fire	EN 13501	Rating per thickness = 10mm	Class	C-s1, d0 (metal frame)	-

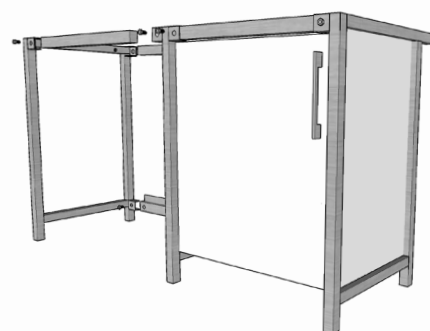
<b>OTHER PROPERTIES</b>					
Acids resistance	SEFA 8-PL-2010 method 8.1	Chemical spot test	Passing / not passing	Passing	
Formaldehyde emission	EN 717- 2	Gas analysis	mg / (m <sup>2</sup> x h)	0,2 - 0,4	
	EN 13986	Formaldehyde emission rating	Rating	E1	
Hygiene	NSF	NSF / ANSI 35	Passing / not passing	Passing	
Volatile Organic Chemical emissions	Greenguard IAQ according to EPA TO-17 and ASTM D 6196 EPA TO-11A and ASTM D 5197	Individual VOCs	TLV	≤ 0,1	
		Formaldehyde	ppm	≤ 0,025	
		TVOC	mg / m <sup>3</sup>	≤ 0,25	
		Total Aldehydes	ppm / ppb	≤ 0,05	
		Total particles	mg / m <sup>3</sup>	≤ 0,05	
Contact with food - Overall migration	EN 1186-3	3% Acetic Acid 24h at 40°C 50%	mg / dm <sup>2</sup>	< 10	
		Ethanol 24h at 40°C 95%			
		Ethanol 24h at 40°C Isooctane 24h at 40°C			
Contact with food - Formaldehyde specific migration	EN 1186-14	3% Acetic Acid 24h at 40°C	mg / kg	< 15	
Evaluation of micro-organisms action	EN 13130-23	3% Acetic Acid 24h at 40°C	Bacterial viability: - Log reduction - Reduction %	> 2,4 > 99,9	
Evaluation of micro-organisms action	JIS Z 2801	Antimicrobial activity after 24h at 35°C	Bacterial viability: - Log reduction - Reduction %	> 2,4 > 99,9	

## FRAME STYLE SYSTEM INCORPORATING CUPBOARDS AND DRAWERS

The **Lasec® Crick furniture range** incorporates a **modular frame system**, fitted with **leveling feet**. The frame system allows for **support across the entire worksurface** to **handle the load of large laboratory equipment**. Cabinetry is fitted to the frame, off the floor, ensuring that there is no contact with liquids in the event of a spill or flooding.

### ADVANTAGES OF THE LASEC® CRICK RANGE

- ✓ Optimize available laboratory space using modular design
- ✓ Easy cleaning and prevention of water damage in the event of a spill or flooding
- ✓ Capable of supporting heavy instrumentation



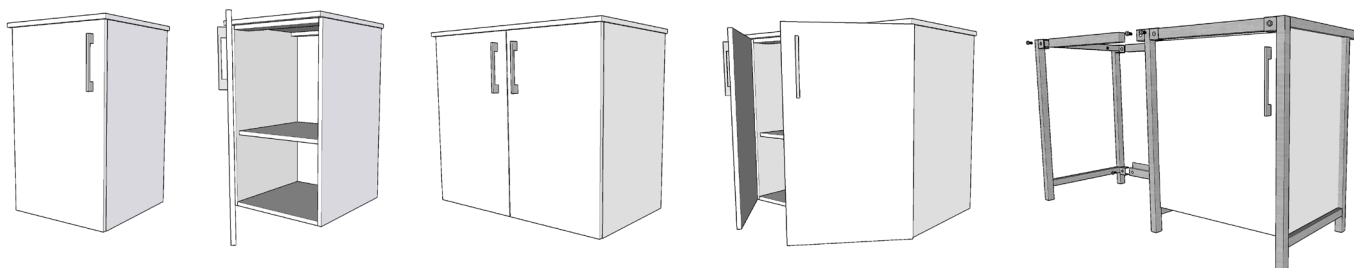
The Lasec® Crick range comes equipped with soft close 110° hinges and full extension soft close runners for all our drawer units.





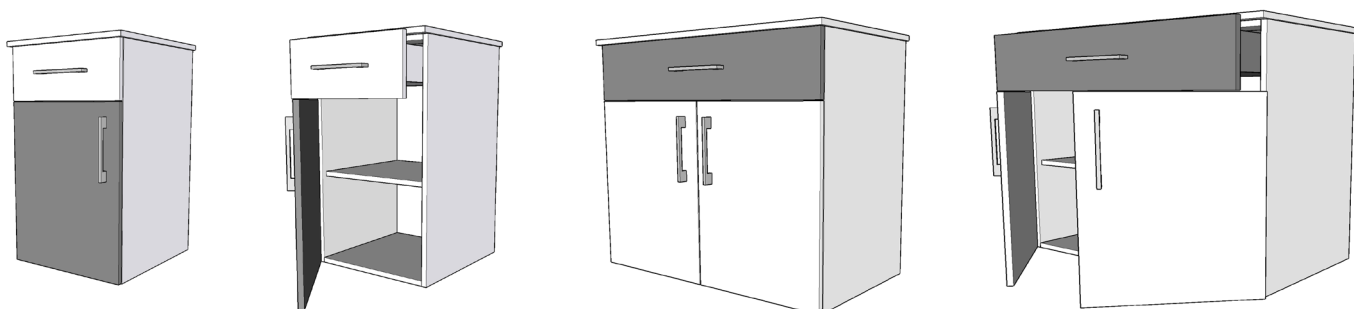
## CUPBOARDS

- Soft close hinges



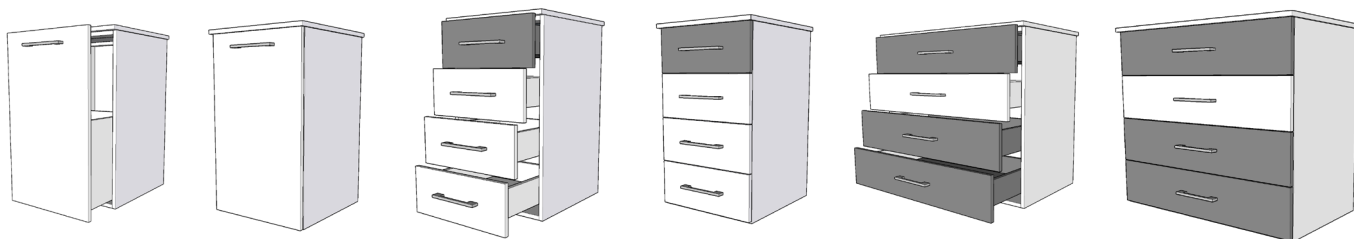
## SINGLE DRAWER CABINETS

- Soft close hinges
- Soft close drawer runners



## MULTIPLE DRAWER CABINETS

- Soft close hinges
- Soft close drawer runners



## MOBILE CUPBOARDS AND DRAWER UNITS

Incorporate our **Lasec® Brunel range** with the **frame style laboratory benches** to optimize laboratory flexibility.

### ADVANTAGES OF THE LASEC® BRUNEL RANGE

- ✓ Flexibility: Utilize the space available for different tasks
- ✓ Adjust your workspace quickly and easily to meet requirements

The Lasec® Brunel range comes equipped with soft close 110° hinges and full extension soft close runners for all our drawer units.

In addition the Lasec® Brunel range offers mobile frame system work benches to increase workspace when required.

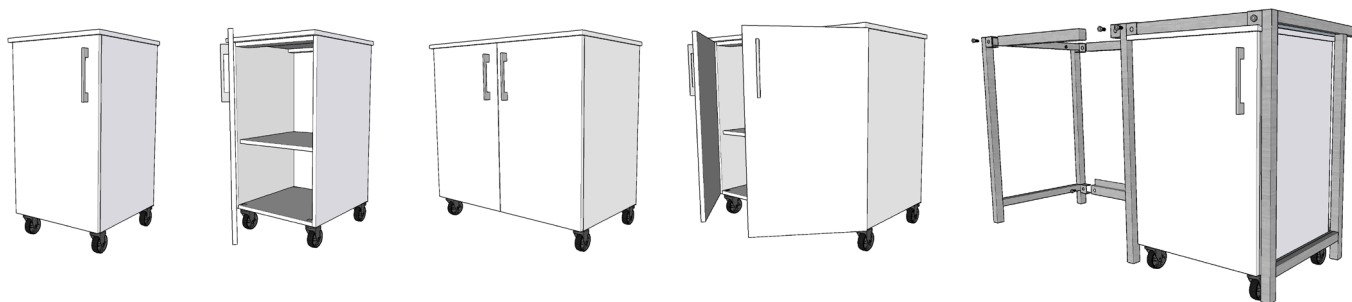


Example of Brunel mobile cupboards incorporated with laboratory bench & frame



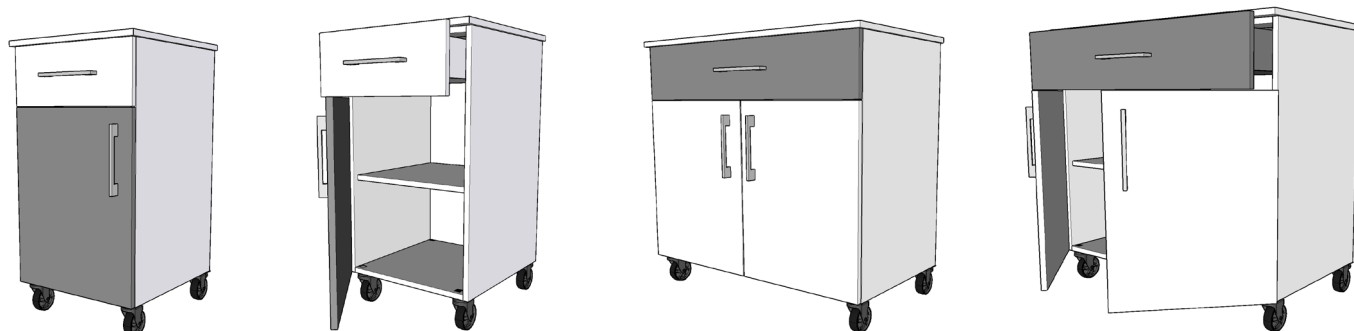
## CUPBOARDS

- Soft close hinges



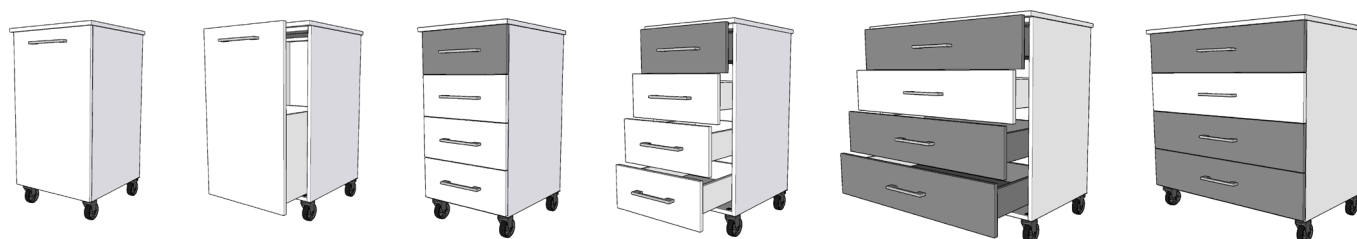
## SINGLE DRAWER CABINETS

- Soft close hinges
- Soft close drawer runners



## MULTIPLE DRAWER CABINETS

- Soft close hinges
- Soft close drawer runners

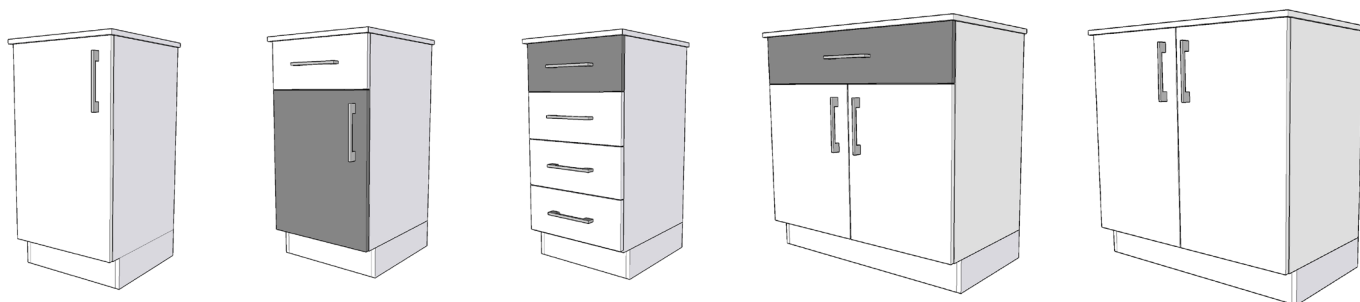


## PLINTH STYLE FURNITURE

The **Lasec® Dalton range** of laboratory furniture is based on a **plinth style furniture system**.

### ADVANTAGES OF THE LASEC® DALTON RANGE

- ✓ Cost effective and easy installation
- ✓ Easy access to plumbing, electrical and gas supply services via a service channel



The Lasec® Dalton range comes equipped with soft close 110° hinges and full extension soft close runners for all our drawer units.

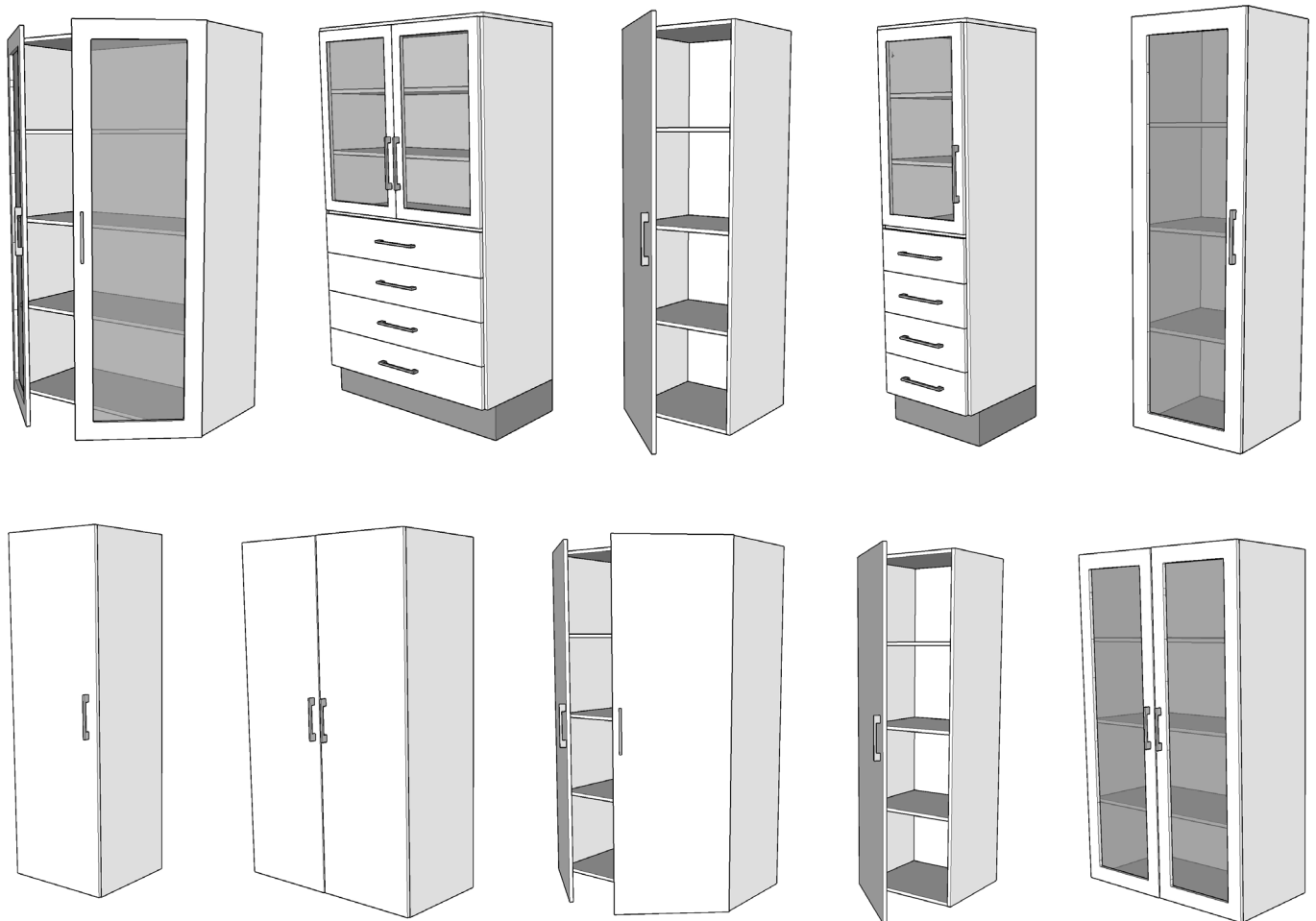


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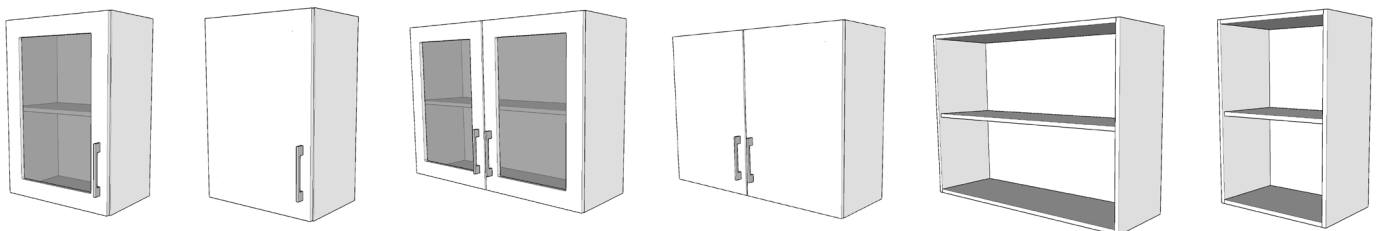
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## TALL CUPBOARDS



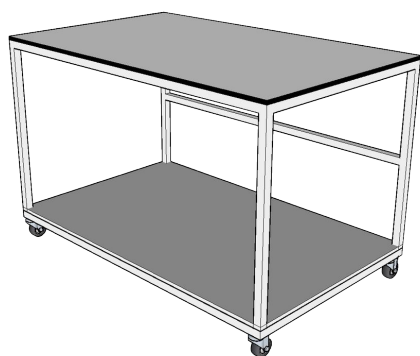
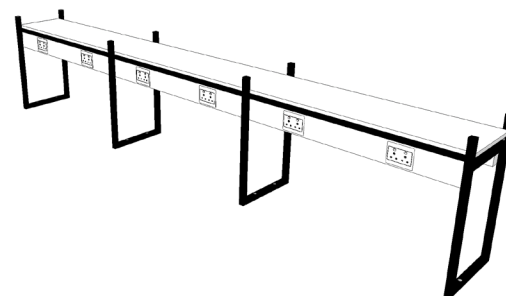
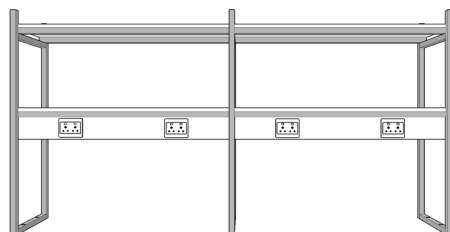
## WALL CABINETS



## ADDITIONAL ACCESSORIES

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**REAGENT  
SHELVES**



**MOBILE  
BENCHES**

## LABORATORY WORKBENCH EQUIPPED WITH REAGENT SHELVES INCLUSIVE OF ELECTRICAL TRUNKING



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## LASEC® LABORATORY GRADE **TAP RANGE**



MIXER **TAP**



COLD WATER **TAP**



WALL-MOUNTED **TAP**

## GAS FITTINGS

Gas taps offered by Lasec®



ELBOW OPERATED  
3-WAY **TAP**



180 DEGREE  
DOUBLE SPOUT  
**GAS TAP**

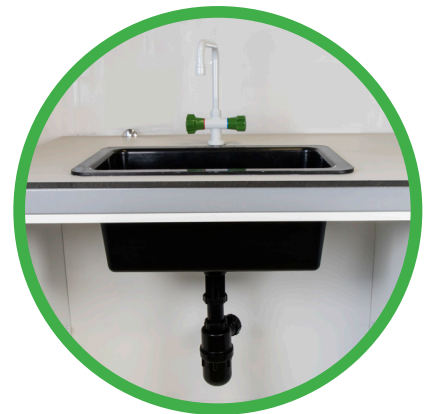


SINGLE SPOUT  
**GAS TAP**

## POLYPROPYLENE LABORATORY SINK SET

Set includes:

- 1 x Sink
- 1 x Waste fitting
- 1 x Bottle trap
- 1 x Plug

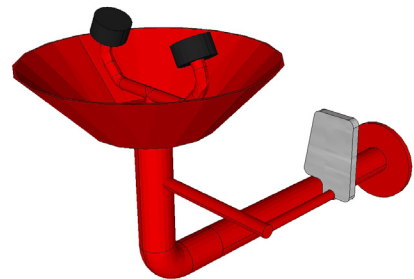


## SAFETY SHOWER

A safety shower available as pedestal or lever activated. Stainless steel and epoxy coated versions available.

## EYEWASH STATION

Available in the bench mount or wall mount version. Elbow operated Epoxy coated eyewash stations.



## DRYING RACK

Laboratory glassware drying rack, with 52 removable pegs. Constructed out of polycarbonate.



## ANTI-VIBRATION TABLES

Anti-vibration tables: Stable surfaces required for specific laboratory balances reduce interference during sensitive measurements.





## VACUU·LAN® - LOCAL VACUUM NETWORKS

VACUU·LAN® vacuum networks **supply vacuum to multiple workstations** with a single vacuum pump. They are an **economical** and **space-saving solution** for laboratories that require multiple points-of-use while eliminating the drawbacks of a building-wide vacuum system. The modular design makes networks **easy, fast, and inexpensive** to install or upgrade.



### SUITABLE FOR EVERY LABORATORY

The individual, laboratory specific approach makes VACUU·LAN® the right solution for every laboratory.

### EXPANDABLE AT ANY TIME

The system can be expanded easily. If requirements change, each vacuum port can be changed or moved separately.

### IDEAL FOR NEW CONSTRUCTION, RENOVATION OR RETROFITS

VACUU·LAN® modules can be surface mounted, installed in furniture, or wall-mounted, as needed. It provides the flexibility to integrate with new laboratory furnishings, retrofit into existing laboratories, or enable easy expansion of established networks.

### CHEMICALLY RESISTANT COMPONENTS AND VACUUM PUMPS

VACUU·LAN® networks use flexible PTFE tubing and PVDF compression fittings, which makes it quick and simple to install a leak-tight vacuum system. A range of chemically resistant vacuum pumps are available for your laboratory application.

An **important aspect** of our design philosophy is to **incorporate equipment** to **ensure** your laboratory meets all **necessary safety standards and protocols**.



## FIRE SAFETY STORAGE CABINETS

- Fire resistant for 90 minutes in accordance with EN11470-1 and SANS5440-1 safety requirements
- Immediate automatic closing of doors and drawers by intergal thermal release system in the event of a fire
- Flexible interior equipment provides customised storage solution
- Underbench, upright, single or double door cabinet size options available, to fit any new or existing laboratory layout

## ACID AND ALKALI SAFETY STORAGE CABINETS

- Safe storage of acids, alkalis and aggressive hazardous materials
- Flexible interior equipment options available
- Underbench, upright, single or double door cabinet size options available, to fit any new or existing laboratory layout
- Not suitable for flammable liquid storage



## COMBINED FLAMMABLE AND CORROSIVE LIQUID STORAGE CABINETS

- Approved 2-in-1 storage of hazardous materials in accordance with EN14470-1 (Type 90) and SANS5440-1 and other chemicals (acids and alkalis)
- Left-hand side of the cabinet is fire resistant for 90 minutes in accordance with EN14470-1 and SANS5440-1 safety requirements
- Right-hand side of the cabinet safely stores acids and alkalis and aggressive hazardous materials
- Flexible interior equipment provides customised storage solution



There are many dangers involved when storing and handling flammable and hazardous liquids in the workplace. When these dangers are underestimated, fatal incidents can occur. Compliant to international (EN14470-1) as well as local (SANS54470-1) standards, high quality safety storage cabinets ensure maximum safety with respect to storage of hazardous liquids.

## AIR PROTECTION CABINETS

The **incorporation** of the **correct type** of **air protection solution** into the laboratory design is **essential**. Possible air protection cabinets include **biological safety cabinets**, **laminar flow cabinets** and **fume cupboards** that **meet** the most stringent **local and international standards**.



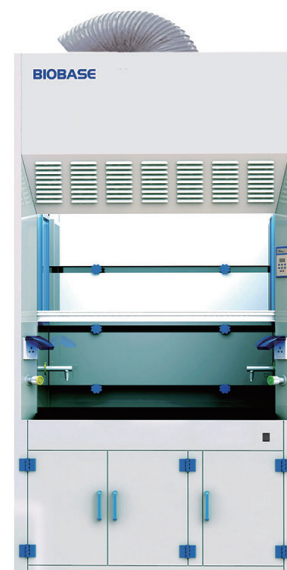
**BIOSAFETY  
CABINETS**

- EN / SANS 12469 and NSF / ANSI 49 certified options available
- Provides personnel, product and environmental protection from airborne biological or particulate chemical agents
- Class I and II options available
- Supplied with hepa filters with 99.999% efficiency at 0.3µm
- Various sizes available to fit laboratory space
- Popular accessories include base stand, UV light and gas fittings



**LAMINAR FLOW  
CABINETS**

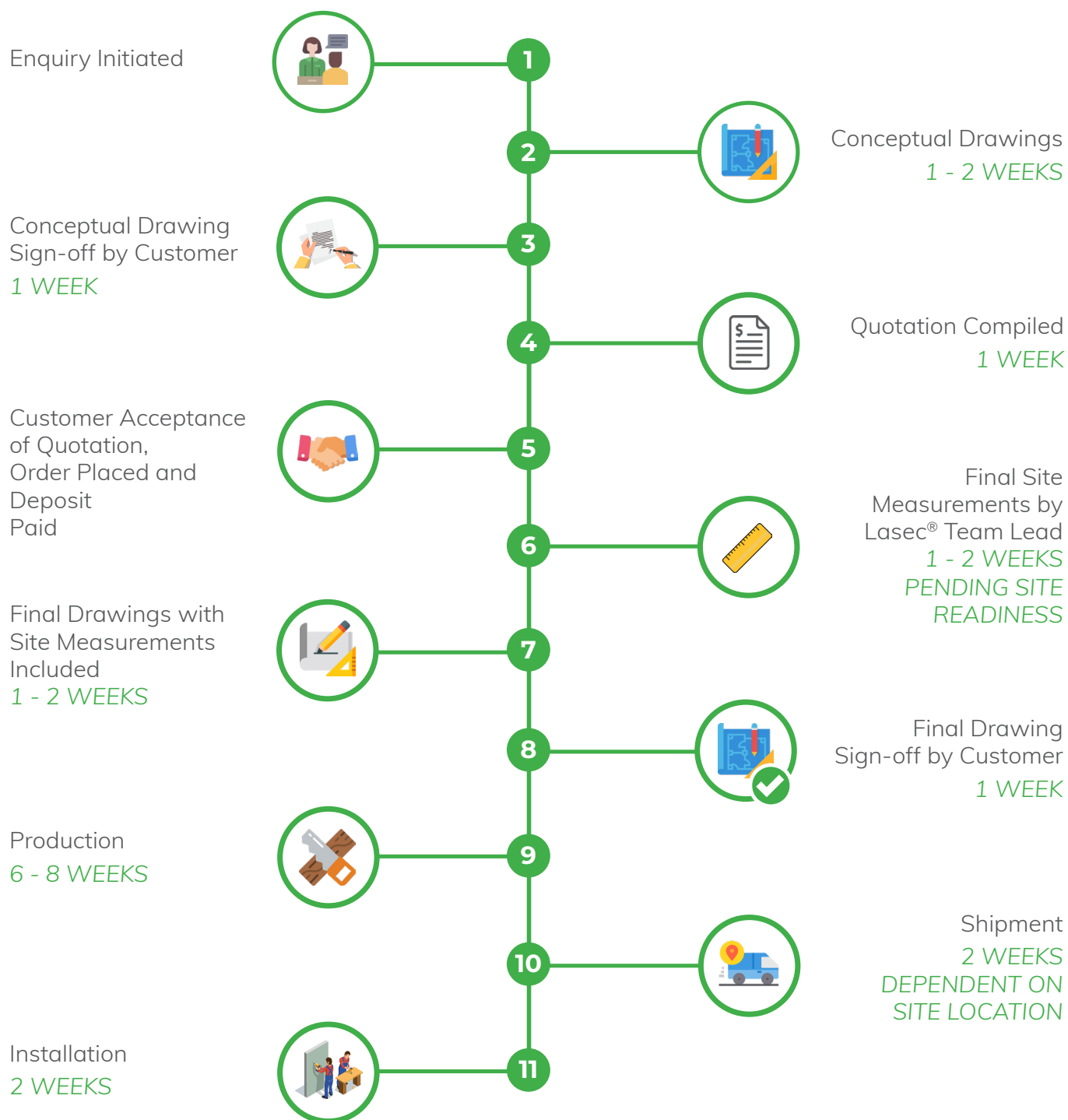
- Provides hepa filtered clean air allowing for a contamination free work area
- Horizontal and vertical airflow versions available
- Includes a stainless steel work surface
- Options available with or without a window sash
- Popular accessories include base stand, UV light and gas fittings



**FUME  
CUPBOARDS**

- Provides personnel and environmental protection from chemical applications
- Actively protects the operator from inhaling toxic vapours and dramatically reduces the risk of fire and explosion when handling hazardous chemicals
- Ducted and ductless options available
- Ductless options are fitted with suitable filters according to the chemical application
- Anti-corrosive polypropylene ducted options are available for chemical applications using strong acids and alkalis

### ESTIMATED FURNITURE PROJECT **TIMELINE**







**BREWERIES**  
JOHANNESBURG, SOUTH AFRICA



**UNIVERSITY**  
LUSAKA, ZAMBIA



**BEVERAGE LAB**  
KAMPALA, UGANDA



**UNIVERSITY**  
DAR ES SALAAM, TANZANIA



**BEVERAGE LAB**  
GABARONE, BOTSWANA



**BREWERIES**  
PORT ELIZABETH, SOUTH AFRICA



**FOOD LAB**  
DURBAN, SOUTH AFRICA



**BEVERAGE LAB**  
NAIROBI, KENYA



**MEDICAL COLLEGE**  
BLANTYRE, MALAWI



**BEVERAGE LAB**  
LUSAKA, ZAMBIA



**UNIVERSITY**  
CAPE TOWN, SOUTH AFRICA



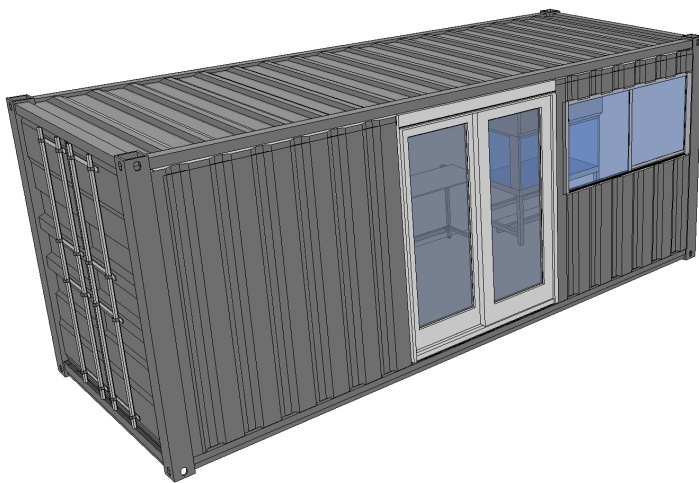
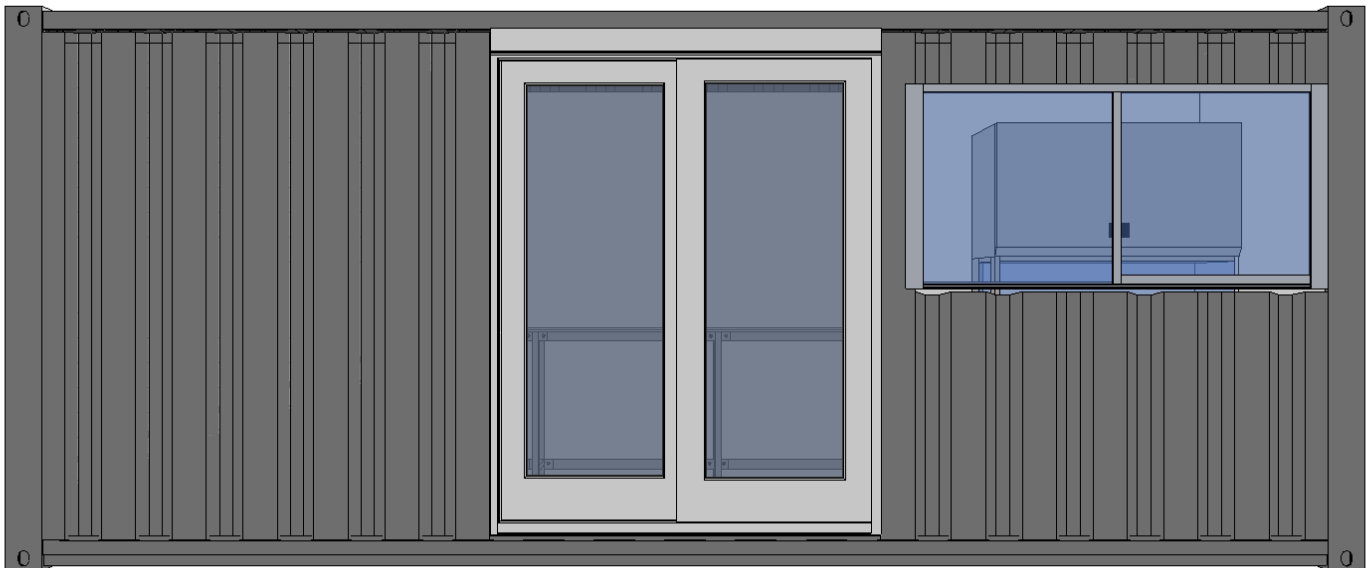
**INSTITUTE OF HIGHER LEARNING**  
JOHANNESBURG, SOUTH AFRICA

Lasec® is able to supply a **fully fitted laboratory** in a **6m customized shipping container** complete **with thermal insulation, airconditioning, window and door**.

Laboratory furniture in this semi-mobile laboratory is designed for flexibility of application and will accommodate the following essential elements:

- **Airflow Hood: Biological safety cabinet, laminar flow or fume hood**
- **Water purification system: To achieve Type II laboratory grade and / or Ultrapure water**
- **Laboratory benches capable of handling the weight of standard laboratory instrumentation**

*Potential to equip with laboratory instrumentation and consumables to achieve fully functioning laboratories for microbiology, food and beverage quality control, water testing, PCR testing and more.*







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