

# MACHLAB™

DELIVERING SOLUTIONS

DESIGN & BUILD

## ARCHITECTURAL PLAN

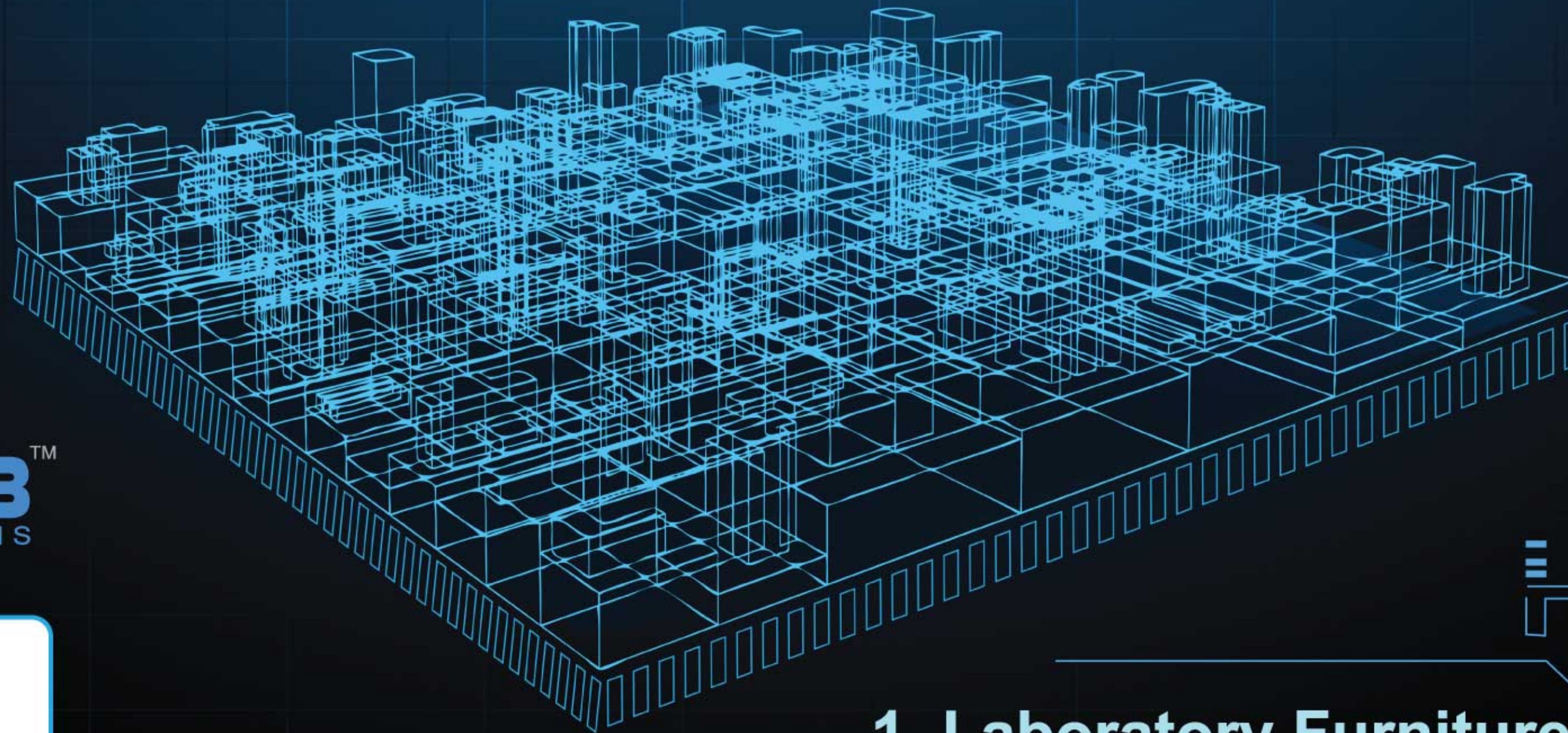
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## ONLINE SENDING

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## PLAN AND ELEVATION

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**MACHLAB™**  
DELIVERING SOLUTIONS

[www.machlab.com.my](http://www.machlab.com.my)

## OUR EXPERTISE:

- DESIGN & BUILD
- LABORATORY FURNITURE
- ORIGINAL EQUIPMENT MANUFACTURER
- TURNKEY CONTRACTING
- INDUSTRIAL & ESD WORKBENCH
- ORIGINAL DESIGN MANUFACTURER

- PROJECT MANAGEMENT
- BESPOKE FURNITURE

## 1. Laboratory Furniture 2. Technical Furniture

THE COMPLETE INDUSTRY SPECIALIZED  
TECHNICAL FURNITURE SYSTEM



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**We Provide Solutions. From Planning to Design & Build and Maintenance.**

**We are a long established manufacturer and have a great deal of experience in the technical furniture industry.**



## Welcome to Machlab.

We are a long established manufacturer and have a great deal of experience in the technical furniture industry. We provide a full range of laboratory and industrial products and services, including laboratory design and build, furniture supply and installation, fume cupboards, fume extraction systems, safety equipments, mechanical pipework, electrical wiring, building works and maintenance & testing services.

We offer a comprehensive, cost-effective and professional range to cater for all aspects of fitting out, remodelling and refurbishment of laboratories in the Industrial, Educational and Healthcare sectors throughout Malaysia.

Whether you require professional advice on laboratory design, a complete turnkey multidiscipline installation, maintenance of an existing installation, or a spare part, Machlab can provide the solution.

For additional information, please visit our website [www.machlab.com.my](http://www.machlab.com.my) or contact us.



# Why Choose Machlab?



- We have our own team of certified designers to support your planning needs.
- Our own manufacturing facility produces a wide range of products to offer the best solution for your needs.
- Our services and any products we supply comply with current legislation, recommendations, regulations, Codes of Practice and international standards.
- Our extensive experience of laboratory installations means that we can advise on what works best for a particular situation. We can help you avoid the pitfalls that can arise and that others may not have encountered.
- Against a similar specification we are confident that our prices are highly competitive. If we can see a way of achieving a similar but better result we will offer an alternative specification - this may mean that our price is slightly higher than competitors but likewise our specifications will be too.
- We take pride in providing our customers with a laboratory design and installation that delivers what they need and continues to do so. We pay close attention to your needs, provide dedicated supervision of your project and an after-sales service that is second to none, which only a longstanding manufacturer such as Machlab can provide.

# The Machlab Culture

Experience, technical innovation and creativity are at the core of who we are.

For more than 20 years, we have concentrated on leveraging these assets to deliver solutions for our clients. We place strong emphasis on our people and Research & Development to provide value-added services to our clients.

Our strength lies in our never-ending quest to improve ourselves: from resources to skills expertise and industrial experience, we have our finger on the pulse of global trend developments.

Our work culture is one defined by product quality, innovative design and service consistency.

Today, our time-proven art and aptitude for combining function with aesthetics are reflected in our expanding portfolio of projects, both big and small.

We welcome the opportunity to assist customers, architects, consultants, project managers etc develop schemes to ensure customers realise their expectations and get a laboratory that will give them the best prospect of achieving the success they strive for. After all, laboratories are a major expense so it pays to get it right.

**At Machlab we believe in providing the right solution backed up by cost-effective pricing and a high level of customer service.**



# Design and Build

Our success lies not only with our exceptional pool of talented architects and designers, but also with our specialised teams of engineers and consultants. Thus ensuring that all aspects of our works are kept to the highest standards; providing added value and delivering solutions.

The problems our clients meet are often multidimensional. From cost, time and quality assessments to resource planning and process management, we seek to minimize the risks while maximizing the prospects of our clients' projects.

We recognize the importance of our clients' projects and work towards maximum satisfaction with our services. Vigorous planning and sound management of projects ensure that deadlines are met, costs are minimized and success is delivered.

Whether it is the design and optimization of an educational laboratory, the renovation and refurbishment of a commercial laboratory or the design and construction of a medical laboratory, we design, build and deliver solutions.



# Contracting

Our Contracting Division is skilled in dealing with turnkey projects, multidiscipline projects, or projects involving liaison via a third party.

We are used to dealing with main Contractors, specialist subcontractors, architects, project management companies et cetera.

Our team of experts can provide the full spectrum of products and are conversant with all aspects of health & safety documentation, bills of quantities, estimate and budget scheduling, AutoCAD drawings and Operating & Maintenance manuals.



# Technical Services

Our technical service team is a gateway to a wholesome solution. We anticipate your future needs by connecting you to our experts, with whom you can discuss further to ensure that your needs are at the heart of our longer-term servicing programme.

We will work closely with your team in every aspect to create a precise work flow that guarantees your plans are translated into an efficient, operational, quality and safety management.



# Bespoke Order

In addition to laboratory furniture systems, seating and laboratory equipment, we can design, customize and produce the laboratory furniture for your specific needs while maintaining the highest quality standards.

Our strength lies in our flexible yet stringent quality control. Whether you require additional setups for an existing laboratory or wish to optimize the space usage of a new laboratory, we have the resources and expertise to provide the best bespoke design solutions.

These include custom sizes, materials, accessories, design configurations, additional functions finishing, added mechanical strength or rigidity etc.





# Astoria Suspended System



The Machlab ASTORIA suspended system offers a holistic solution for your laboratory space. Designed for maximum versatility and flexibility, the ASTORIA is as easy to assemble as it is to maintain.

The under-bench storage units can easily be removed, interchanged or replaced without suspending any laboratory work. Any hazardous spillage can also be treated or disinfected immediately.

All mechanical pipeworks, plumbings and electrical wirings are cleverly concealed to present a seamless uncluttered laboratory that is not only fit for purpose but pleasant to the eyes too.

ASTORIA fully integrates with a wide range of fume cupboards, storage cabinets, ancillary fittings and safety equipments to completely equip your laboratory.





# Decker Pedestal System

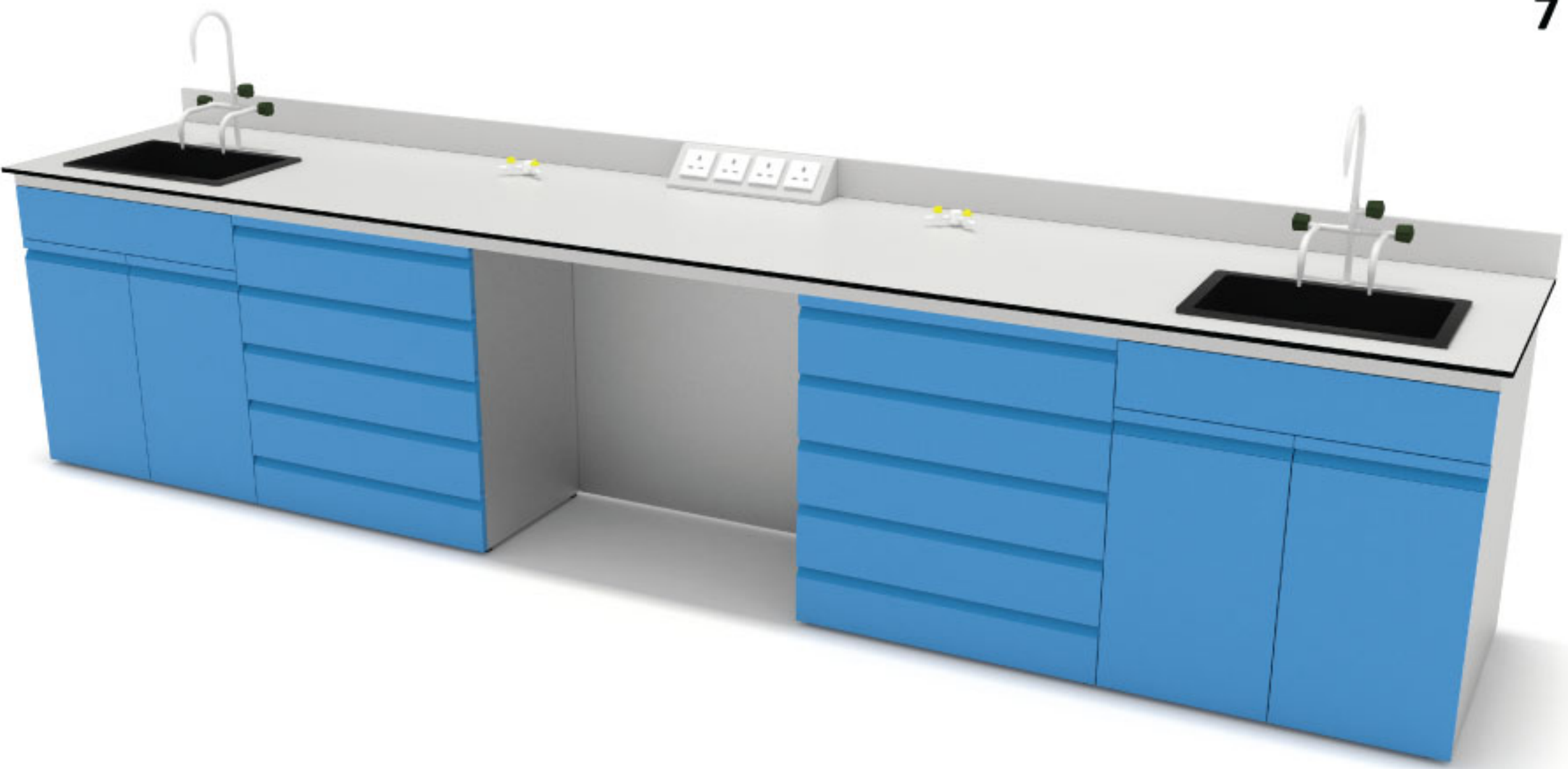


One of Asia’s most widely used laboratory furniture system, the DECKER pedestal system is the ideal choice for laboratories where durability is of prime importance.

Study floor mounted storage units provide complete support to the worktop. Decker fully integrates with Machlab comprehensive range of base cabinets, which are ergonomically designed to enhance your productivity

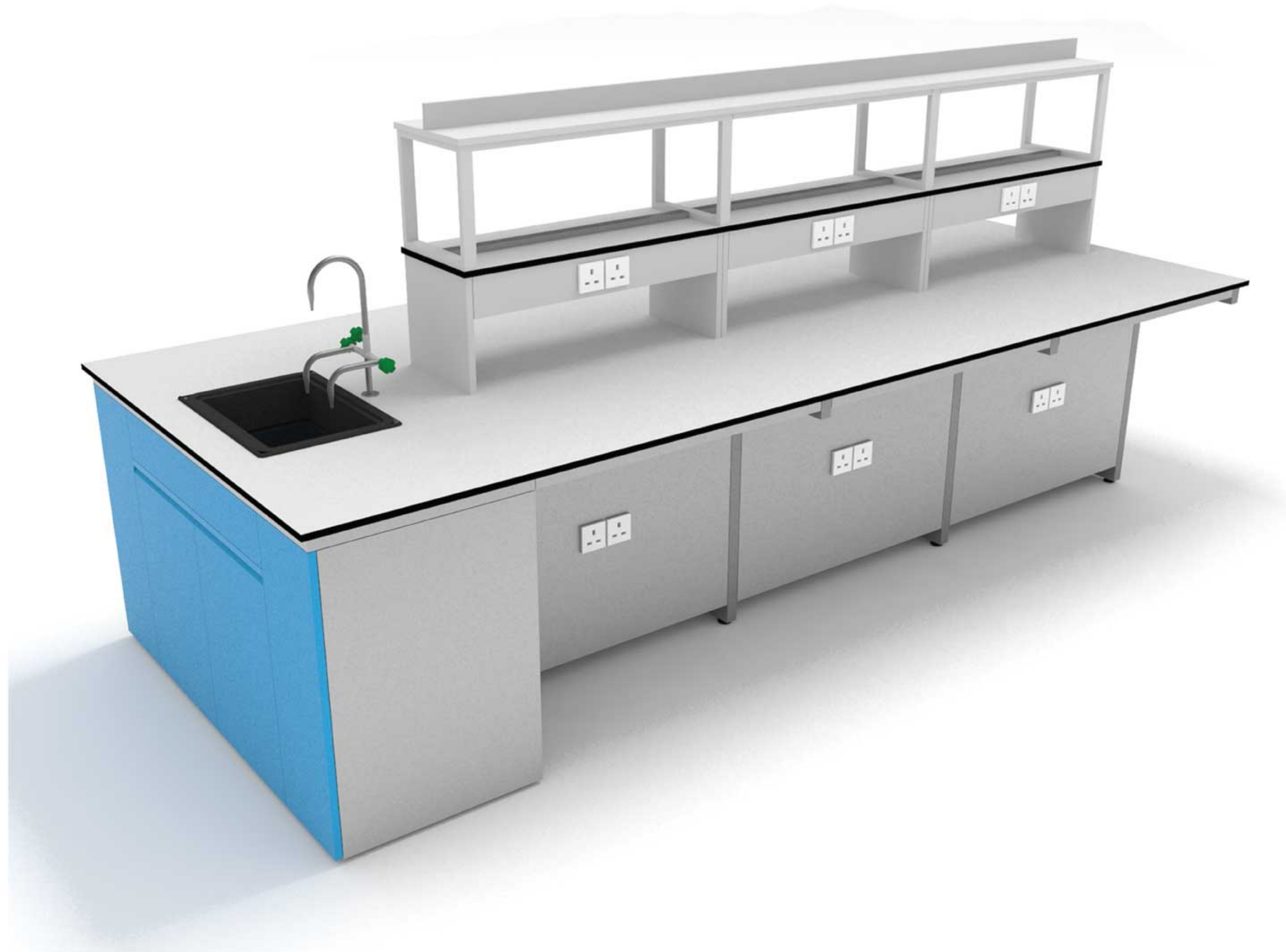
and working experience. Toe space areas are neatly protected with skirtings, which can be covered with vinyl floor finish to create a clean working environment.

DECKER also features an abundant choice of shelving options; from multi-tier reagent racks to height adjustable steel shelves. If you are looking for a laboratory furniture system that offers variety, functionality and durability. Look no further. DECKER is ideal for you.





# Avanti Cantilever System

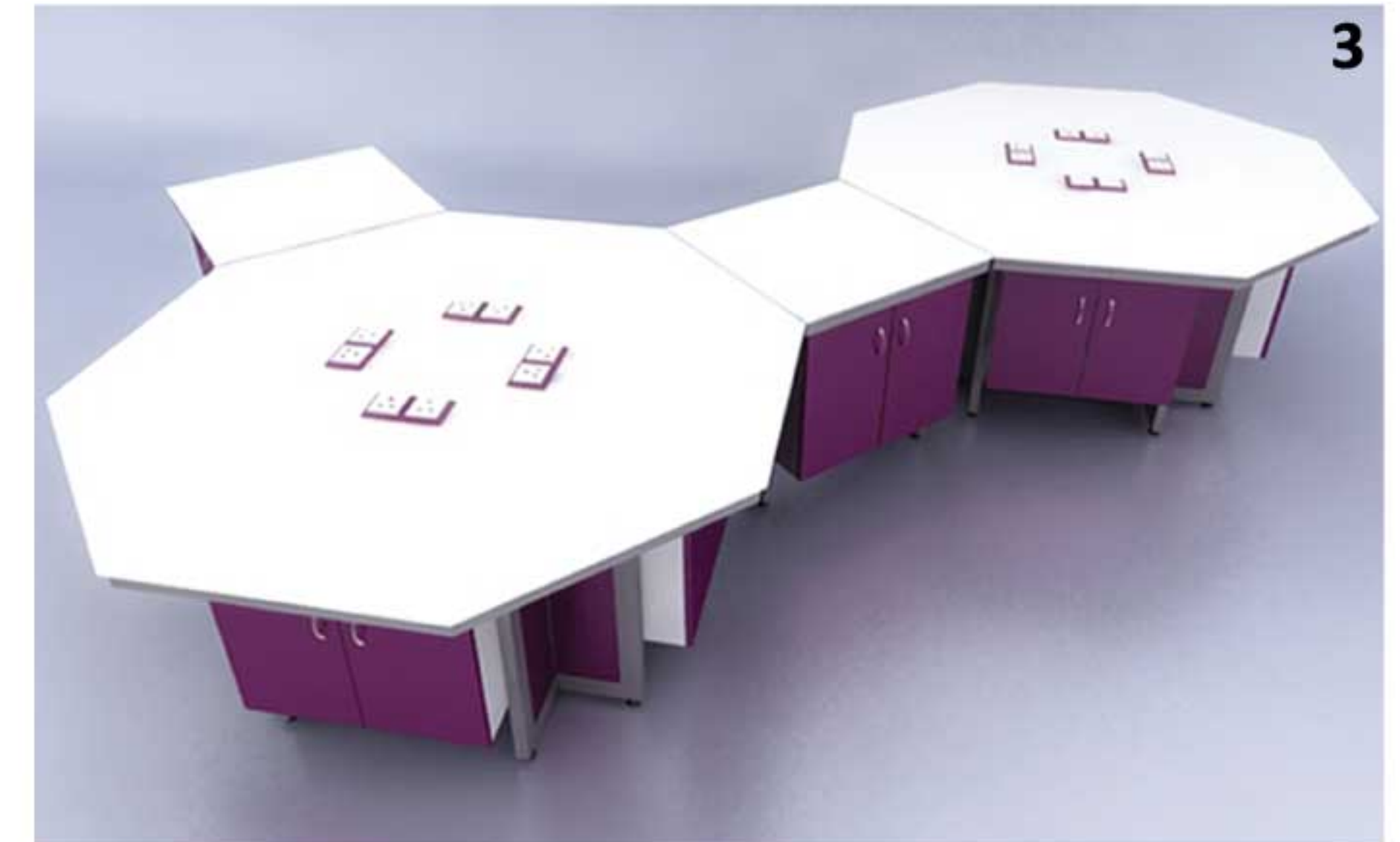
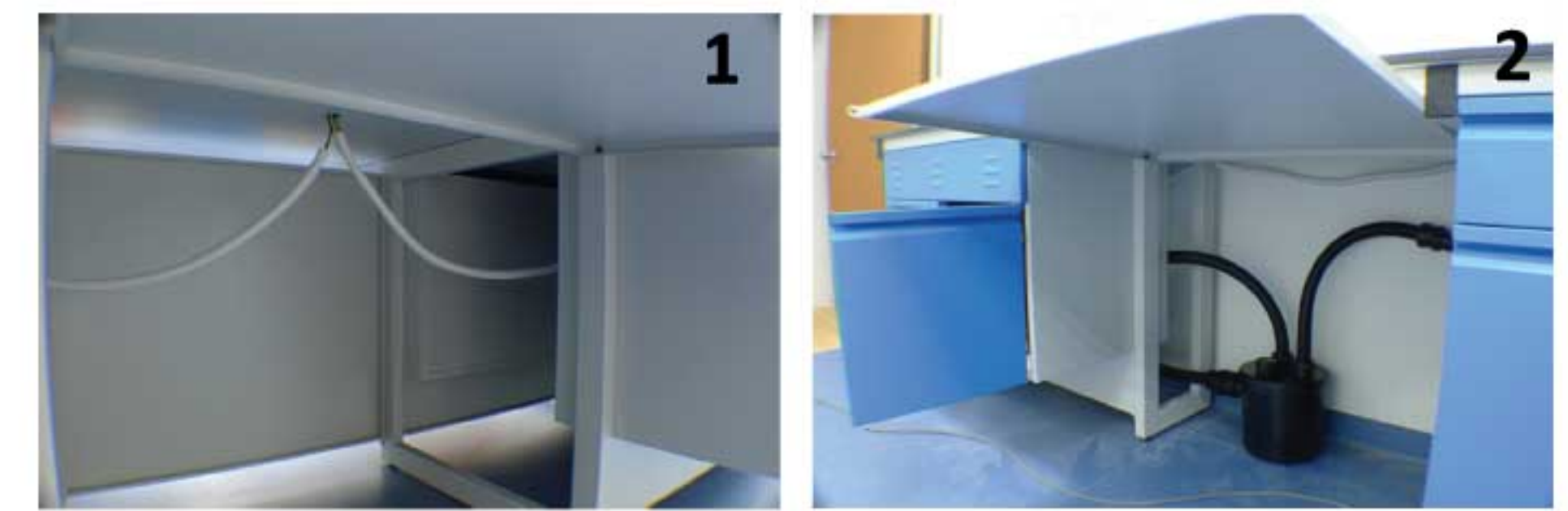


The Machlab AVANTI cantilever system allows the worktop to be mounted independently of the base units on tubular steel support frames. Ideal for a laboratory that requires maximum accessibility and floor space for equipments.

Mobile under-bench units provide additional storage space where necessary, enhancing ergonomics for laboratory users.

Maintenance is easy with virtually no obstruction to under-bench space and highly accessible pipeworks and electrical wirings.

AVANTI is fully compatible with Machlab shelving systems, accessory fittings and storage units. Optional panels and fillers can also be added to further improve aesthetics and practicality.





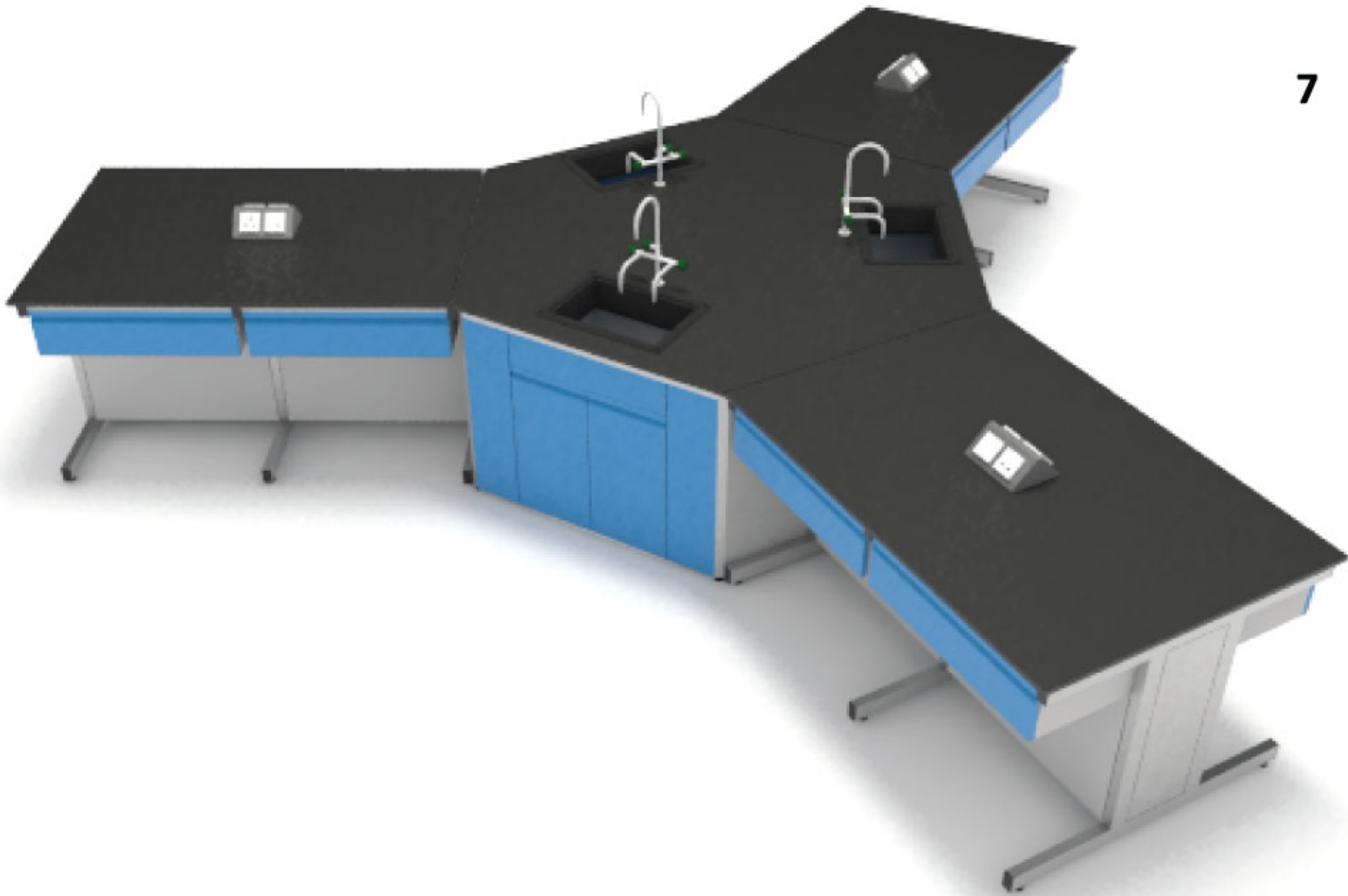


The Machlab AKO hybrid design concept delivers flexibility, performance and economy. AKO utilizes modular, custom sized components to adapt to changing personnel, equipment and procedures.

The AKO service void is equipped with full-width removable access panels. Suspended and mobile base cabinets are easy to relocate, providing storage

flexibility and the ability to create knee or equipment spaces.

Heavy-duty height adjustable steel shelves securely support heavy loads and provide maximum storage capacity above the work surface. The end result is an adaptable laboratory furniture system providing an optimum combination of performance and value, for both new and expanding laboratories.





# WORK SURFACES

## MATERIAL SELECTION

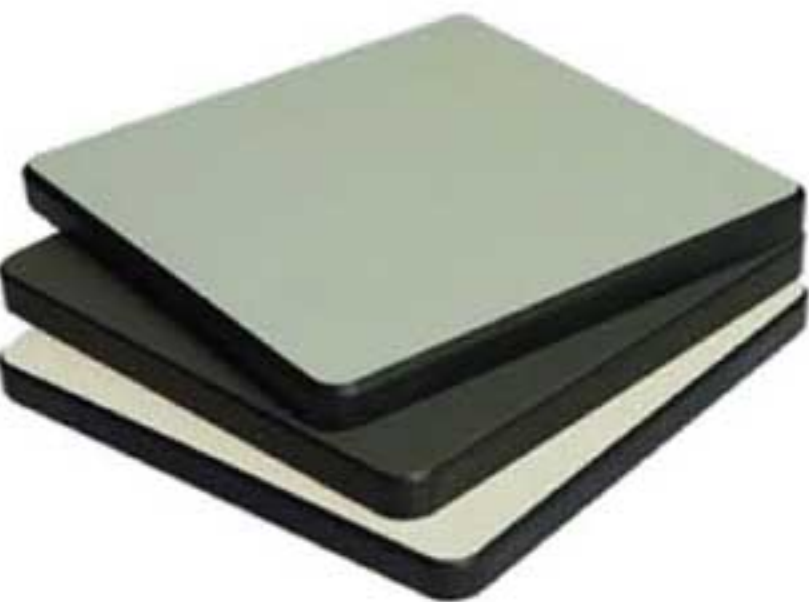
Proper selection of work surface material is critical to creating a functional laboratory. The work surface must be appropriate to the type of work performed in the lab and the chemicals that are used, or the integrity of the entire lab may be jeopardized.

Machlab offers a comprehensive range of choices with various colours, thicknesses, mechanical and chemical properties.

Our project managers will be happy to discuss the benefits of each surface and assist you in selecting the right material that matches your application, laboratory environment and budget requirements.



**Solid Cast Epoxy**  
This combines excellent chemical resistance with the possibility of having flush-fit sinks and integral marine edging. Joints are connected with an epoxy grout, with the same material properties as the worktop to create a continuous, impervious work surface. Epoxy resin is suitable for microbiological and radioactive areas where ease of decontamination is essential.



**Solid Grade Laminate - Phenolic Resin**  
This is the most universal laboratory worktop material, combining good chemical resistance with mechanical strength. It offers comparable properties to epoxy worktops and represents a cost effective solution to many requirements. Phenolic resin worktop is most suitable for laboratories in schools and commercial laboratories.



**Plastic Laminate**  
This top consists of a plastic laminate (Formica®, Wilson Art®, Micarta®, etc.) bonded with water-resistant adhesive to a solid core chipboard. It is the most economical option but does not perform as well as the other worktops when it comes to strength or chemical resistance. Plastic laminate is a particularly good choice for dry labs, and is a popular choice in technology labs. It comes in a variety of colors and is attractive to look at. Also available in chemical resistant finish.



**Stainless Steel**  
These tops, curbs and shelves are fabricated of 16-gauge, Type 304 or 316 with a #4 finish. All corners, open ends and joints are continuous TIG welded and ground smooth. Adequate box channel reinforcements are provided on the underside of the tops. Optional sound-deadening material is applied to the underside. Stainless steel sink bowls and cupsinks are integrally welded into the top, providing a joint-free assembly.

# WORK SURFACES

## PERFORMANCE PROPERTIES

Description	Epoxy Resin	Phenolic Resin	Plastic Laminate	Stainless Steel
Basic Material	Epoxy resins and inert materials	Solid Core Phenolic	Wood particle core with plastic laminate surface	Type 304 stainless steel
Physical Properties	Extremely hard	Hard	Plastic laminate with moulded wood core, difficult to repair	Heavy - gauge Type 304
Appearance / Colour	Low sheen finish, Black and grey	Smooth finish, Black and colours	Smooth satin finish Black and colours	Smooth satin finish
Cost	Initial supply and installation cost is not an adequate indicator of long-term value. Work surface should be chosen based on laboratory requirements and usage.			
Ease of Cleaning	Good	Good	Fair	Excellent
Chemical Resistance	Excellent resistance to wide range of acids, solvents and alkalis	Excellent resistance to wide range of acids, solvents and alkalis	Poor	Good resistance to wide range of chemicals; subject to attack by some
Stain Resistance	Good	Good	Good	Good
Bacteria Resistance	Excellent	Good	Good	Excellent
Heat Resistance	Excellent	Good	Fair; should not be exposed to direct flame	Discolours at high temperature
Impact Resistance	Excellent	Good	Fair	Excellent
Load Capacity*	Good	Good	Good	Excellent
Electrical Conductivity	None	None	None	Highly conductive
Moisture Resistance	Excellent	Good	Fair	Superior
Use with Fume Hoods	Recommended	Not recommended	Not recommended	Recommended
Standard Thickness**	15mm, 19mm, 25mm	12mm, 16mm 19mm, 25mm	18mm, 25mm, 30mm	N.A
Suggested Use Areas	Areas requiring exceptional chemical and heat resistance	Areas requiring good chemical and heat resistance	Areas requiring limited chemical and heat resistance	High-moisture areas; areas exposed to fire and abrasion

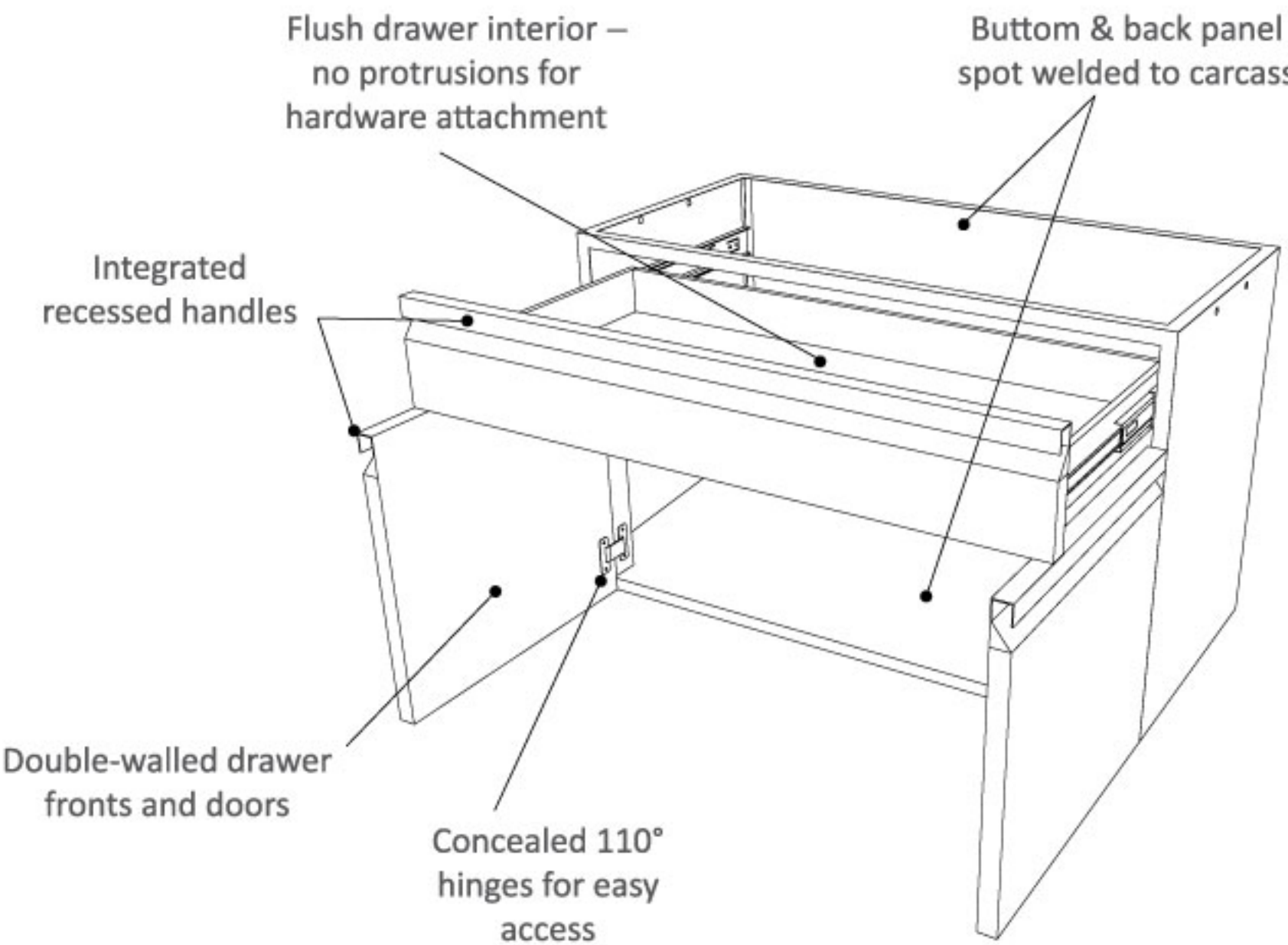
\* Load capacities are also determined by supporting structures.  
\*\* Work surfaces with non-standard thicknesses are also available.

- Other work surface options are available on request.
- Stainless steel work surfaces are available on special order.

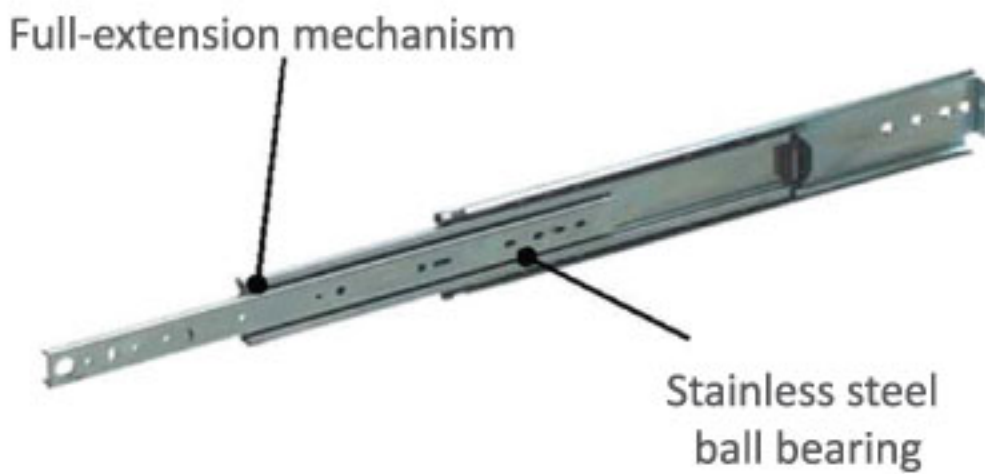


# STORAGE SOLUTIONS

## CABINETS CONSTRUCTION DETAILS



MACHLAB CONSTRUCTION	
Cabinet carcass	0.8
Cross rail	1.0
Levelling bolt attachment	1.0
Drawer support rails	0.8
Drawer assembly	0.8
Door units	0.8
Door attachment bars	0.8
Shelves	0.8



Telescopic Drawer Slide  
(Optional: Runners with nylon rollers)

## QUALITY

### Material

- Cold Rolled steel (CR)
- Electro-Galvanized steel (EG)
- Hot-Dip Galvanized steel (GI)
- Stainless steel (SS)

### Finishing Quality

- Thickness Test
- Gloss Test
- Cross Cut Adhesion Test
- Hardness Test
- Salt Spray Test

ISO 2178  
ISO 2813  
ISO 2409  
ASTM D3363  
ASTM 117

### Finishing Process

- Pre-treatment consisting of degreasing, etching, de-smutting, various rinses and the final phosphating of the substrate.
- Powder application to substrate involves using an electrostatic gun to impart a negative charge to the powder and sprayed onto the grounded substrate.
- Final curing in convection or infrared cure ovens, where crosslinks are formed within the thermoset polymer powder.

### Specifications

- I. Double-walled drawer fronts and doors with full-channelled edges.
- II. Adjustable telescopic ball bearing drawer slides with zinc plated finish allow drawers to lock in a full open position
- III. Heavy-duty nylon levelling glides for pedestal cabinets
- IV. Durable industrial castors for mobile cabinets
- V. Steel concealed hinges with nickel plated finish and 110° opening angle that allows full access to cabinet.
- VI. Integrated recessed handles reduce work obstruction.

## Suspended Cabinets



### BASE CABINETS

PRODUCT CODE	L	D	H	DRAWER	SWING DOOR
SCS-01-1S	450	450	575	-	1
SCS-02-1S	600				

SCS-03-1D1S	450	450	575	1	1
SCS-04-1D1S	600				

SCS-05-3D	450	450	575	3	-
SCS-06-3D	600				

SCS-07-4D	450	450	575	4	-
SCS-08-4D	600				

SCD-01-2S	750	450	575	-	2
SCD-02-2S	900				
SCD-03-2S	1050				
SCD-04-2S	1200				

SCD-05-1D2S	750	450	575	1	2
SCD-06-1D2S	900				
SCD-07-1D2S	1050				
SCD-08-1D2S	1200				

SCD-09-3D	750	450	575	3	-
SCD-10-3D	900				
SCD-11-3D	1050				
SCD-12-3D	1200				

SCD-13-4D	750	450	575	4	-
SCD-14-4D	900				
SCD-15-4D	1050				
SCD-16-4D	1200				

### SINK CABINETS

PRODUCT CODE	L	D	H	DRAWER	SWING DOOR
SCS-09-SK	450	450	575	-	1
SCS-10-SK	600				

SCD-17-SK	750	450	575	-	2
SCD-18-SK	900				
SCD-19-SK	1050				
SCD-20-SK	1200				



## Pedestal Cabinets



### BASE CABINETS

PRODUCT CODE	L	D	H	DRAWER	SWING DOOR
PCS-01-1S	450	450	850	-	1
PCS-02-1S	600				
PCS-03-1D1S	450	450	850	1	1
PCS-04-1D1S	600				
PCS-05-3D	450	450	850	3	-
PCS-06-3D	600				
PCS-07-4D	450	450	850	4	-
PCS-08-4D	600				
PCS-09-5D	450	450	850	5	-
PCS-10-5D	600				
PCD-01-2S	750	450	850	-	2
PCD-02-2S	900				
PCD-03-2S	1050				
PCD-04-2S	1200				
PCD-05-1D2S	750	450	850	1	2
PCD-06-1D2S	900				
PCD-07-1D2S	1050				
PCD-08-1D2S	1200				
PCD-09-2D2S	750	450	850	2	2
PCD-10-2D2S	900				
PCD-11-2D2S	1050				
PCD-12-2D2S	1200				
PCD-13-3D	750	450	850	3	-
PCD-14-3D	900				
PCD-15-3D	1050				
PCD-16-3D	1200				
PCD-17-4D	750	450	850	4	-
PCD-18-4D	900				
PCD-19-4D	1050				
PCD-20-4D	1200				
PCD-21-5D	750	450	850	5	-
PCD-22-5D	900				
PCD-23-5D	1050				
PCD-24-5D	1200				

### SINK CABINETS

PRODUCT CODE	L	D	H	DRAWER	SWING DOOR
PCS-09-SK	450	450	850	-	1
PCS-10-SK	600				
PCD-17-SK	750	450	850	-	2
PCD-18-SK	900				
PCD-19-SK	1050				
PCD-20-SK	1200				

## Mobile Cabinets



PRODUCT CODE	L	D	H	DRAWER	SWING DOOR
MCS-01-1S	450	350/400	575	-	1
MCS-02-1S	600				

MCS-03-1D1S	450	350/400	575	1	1
MCS-04-1D1S	600				

MCS-05-3D	450	350/400	575	3	-
MCS-06-3D	600				

MCS-07-4D	450	350/400	575	4	-
MCS-08-4D	600				

MCD-01-2S	750	350/400	575	-	2
MCD-02-2S	900				
MCD-03-2S	1050				
MCD-04-2S	1200				

MCD-05-1D2S	750	350/400	575	1	2
MCD-06-1D2S	900				
MCD-07-1D2S	1050				
MCD-08-1D2S	1200				

MCD-09-2D2S	750	350/400	575	2	2
MCD-10-2D2S	900				
MCD-11-2D2S	1050				
MCD-12-2D2S	1200				

MCD-13-3D	750	350/400	575	3	-
MCD-14-3D	900				
MCD-15-3D	1050				
MCD-16-3D	1200				

MCD-17-4D	750	350/400	575	4	-
MCD-18-4D	900				
MCD-19-4D	1050				
MCD-20-4D	1200				



# Wall Hung Cabinets



DESCRIPTION	PRODUCT CODE	L	D	H
OPEN SHELF	WCS-01-10	400	350	600/ 750/ 900
	WCS-02-10	450		
	WCS-03-10	500		
	WCD-04-20	800		
	WCD-05-20	900		
	WCD-06-20	1000		

DESCRIPTION	PRODUCT CODE	L	D	H
STEEL HINGED DOORS	WCS-07-1S	400	350	600/ 750/ 900
	WCS-08-1S	450		
	WCS-09-1S	500		
	WCD-10-2S	800		
	WCD-11-2S	900		
	WCD-12-2S	1000		



DESCRIPTION	PRODUCT CODE	L	D	H
GLASS HINGED DOORS	WCS-13-1G	400	350	600/ 750/ 900
	WCS-14-1G	450		
	WCS-15-1G	500		
	WCD-16-2G	800		
	WCD-17-2G	900		
	WCD-18-2G	1000		

DESCRIPTION	PRODUCT CODE	L	D	H
GLASS SLIDING DOOR	WCS-19-1G	400	350	600/ 750/ 900
	WCS-20-1G	450		
	WCS-21-1G	500		
	WCD-22-2G	800		
	WCD-23-2G	900		
	WCD-24-2G	1000		

# High Cabinets



DESCRIPTION	PRODUCT CODE	L	D	H
OPEN SHELF	HCS-01-10	400	400	1800/ 2100
	HCS-02-10	450	450	
	HCS-03-10	500	500	
	HCD-04-20	800	400	
	HCD-05-20	900	450	
	HCD-06-20	1000	500	

DESCRIPTION	PRODUCT CODE	L	D	H
STEEL HINGED DOORS	HCS-07-1S	400	400	1800/ 2100
	HCS-08-1S	450	450	
	HCS-09-1S	500	500	
	HCD-10-2S	800	400	
	HCD-11-2S	900	450	
	HCD-12-2S	1000	500	



DESCRIPTION	PRODUCT CODE	L	D	H
GLASS HINGED DOORS	HCS-13-1G	400	400	1800/ 2100
	HCS-14-1G	450	450	
	HCS-15-1G	500	500	
	HCD-16-2G	800	400	
	HCD-17-2G	900	450	
	HCD-18-2G	1000	500	

DESCRIPTION	PRODUCT CODE	L	D	H
GLASS SLIDING DOOR	HCS-19-1G	400	400	1800/ 2100
	HCS-20-1G	450	450	
	HCS-21-1G	500	500	
	HCD-22-2G	800	400	
	HCD-23-2G	900	450	
	HCD-24-2G	1000	500	



# Fume Cupboards, Canopy Hoods & Ventilation

We supply fume cupboards, fume hoods and extract/safety cabinets of various technical specifications and qualities.

Specifying the right fume cupboard or fume extraction equipment appropriate to the users' needs is essential to safety in the workplace, protection of the environment and meeting health & safety regulations.

The list below gives an indication of the type of equipment we can supply.

Please contact us for more detailed information and advice, or register and visit our website.

- Fume Cupboards for industrial or educational use in compliance with EN 14175, ASHRAE 110-1995 and BS 7258
- Freestanding, bench mounted or mobile fume cupboards
- General purpose/standard, low level and walk-in fume cupboards
- Special purpose and recirculating fume cupboards
- Constant and variable volume fume cupboards
- Fume Extract Hoods and Canopies; bench or overbench mounted
- Local exhaust ventilation systems
- Equipment extract systems
- Extract/Safety Cabinets including microbiological and laminar flow





# Laboratory Safety & Emergency Equipment

## SAFETY STORAGE CABINETS

- Flammable liquids
- Corrosive substances
- Bottled gas cylinders
- Hazardous chemicals

## EMERGENCY EQUIPMENT

- Emergency eyewash
- Emergency drench shower
- Spill containment kits
- Fire safety equipment



# Laboratory Chairs & Stools

We offer one of the most comprehensive ranges of laboratory seating in the region with laboratory chairs, stools and footrests produced to high quality specifications.

Available in a variety of designs and materials, we offer multi and specialist application ranges, including ESD static-safe and sterile/cleanroom products, designed to ensure that both the ergonomic requirements of the user and the demanding technical requirements of the laboratory are met.

Please contact us to discuss your requirements.





# Industrial Workbenches

Machlab industrial workbenches stand up to the demands of the harshest environments. We provide bespoke services to design and produce the workbenches to meet all of your requirements.

Choose from a large variety of materials, finishing, mechanical specifications and configurations: from light-duty, medium-duty to heavy-duty workbenches.





# ESD Workbenches

Machlab manufactures ESD safe workbenches, drawer cabinets, trolleys and chairs for the electronics industry. By using high quality ESD products, Machlab will help you safeguard your components and end products from harmful ESD related problems.

Creating an EPA requires that every step along the way from component receipt to finished product is considered, and that certified clothing, floors, shoes, storage and furniture are used to maintain protection throughout.

