

# Lab Furniture

Laboratuvar Mobilyası

# 2023



**SEREN**<sup>®</sup>  
PROJECT

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FURNITURE

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FURNITURE

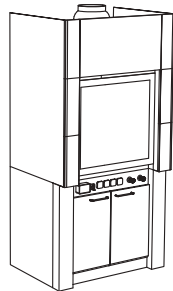
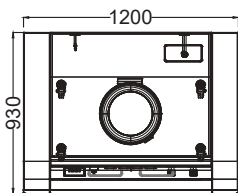
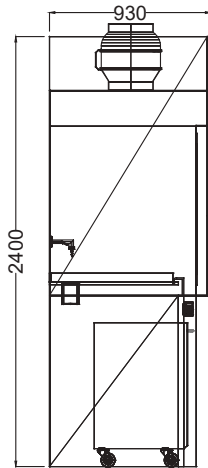
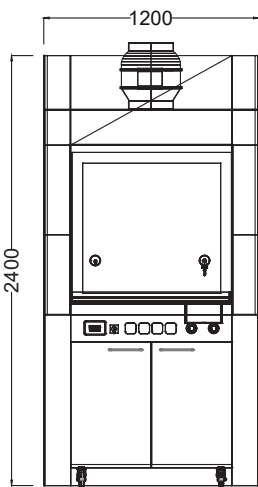
**62** LAB FURNITURE  
REFERENCES





A modern research laboratory with white cabinetry, a central island with a sink, and a grid ceiling. The room is bright and clean, with a large window on the right side. The text "RESEARCH LAB FURNITURE" is overlaid in blue on the right side of the image.

# RESEARCH LAB FURNITURE

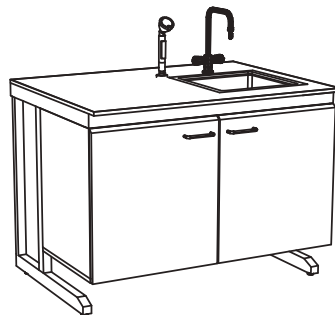
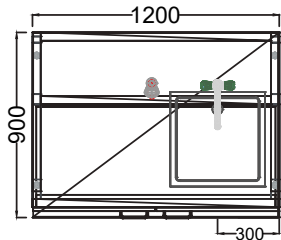
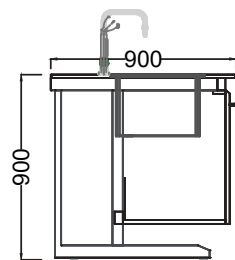
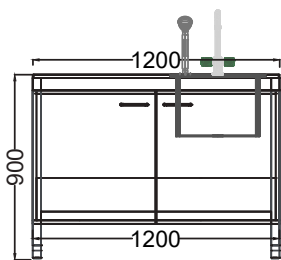


1mm Galvanized Steel  
 End. Ceramic Work Surface  
 250 fan, 1350m<sup>3</sup>  
 TFT Digital Control Panel  
 Must be an Emergency Stopper.  
 Movable Cupboard Under Fume Hood, 2 Doors,  
 1 Shelf, 1mm Galvanized Steel  
 Cabinet Dimensions: 1200 x 500 x 700 h mm  
 There must be 1 unit of gas and 1 unit of water in the device.  
 6 mm Tempered up and down movable glass





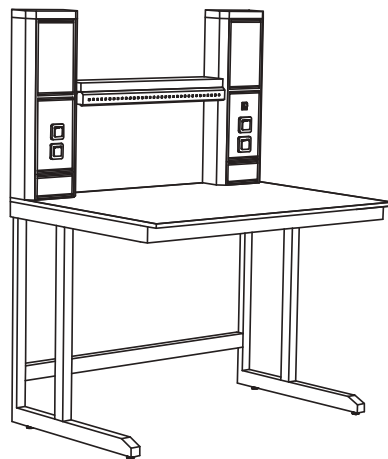
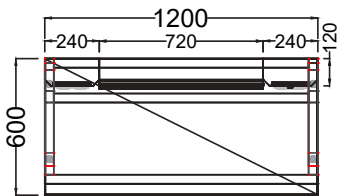
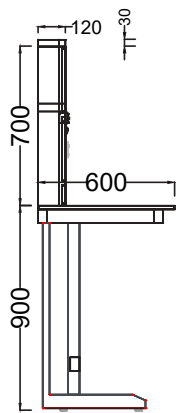
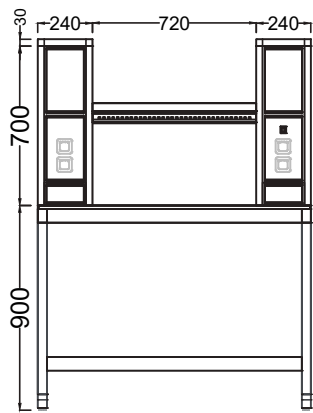
## Dual Laboratory Module



- 40\*40 Polypropylene Sink-Plastifer
- Hot Cold Double Tap - Broen
- Single Eye Shower Broen
- 40\*60\*1.5 Profile C-Foot and Sleepers DKP
- Rear Leg Strut 20\*40\*1.5 Proof DKP
- 16mm G-Lab Compact Work Floor - Gray
- 1mm Galvanized Steel Sink Cabinet (Double Walled Doors)
- 1 adjustable shelf in Single Door Cabinets.
- 128 U Handle -Unpainted
- Hinges Hafele 110°, retarder

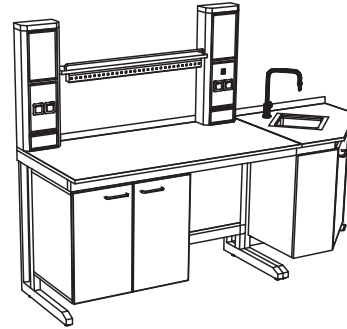
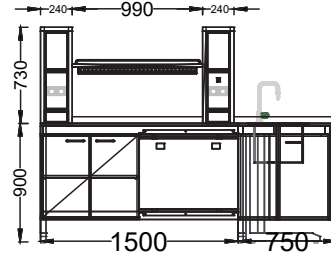
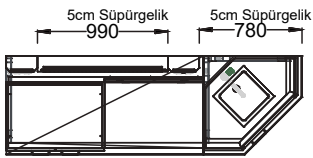
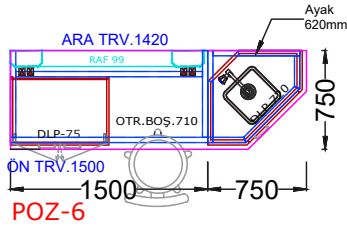






- 40\*60\*1.5 Profile C-Foot and Sleepers DKP
- Rear Leg Strut 20\*40\*1.5 Proof DKP
- 16mm G Lab Compact Working Floor
- 1mm Galvanized Steel Energy Towers and racks
- 1 x Led Lighting Lamp Under Shelf
- Two Schneider 220V-16 amps in each tower. Power point

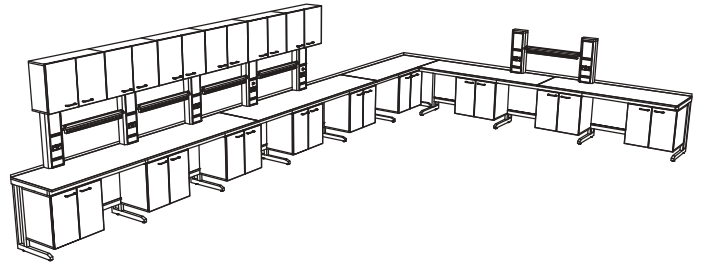
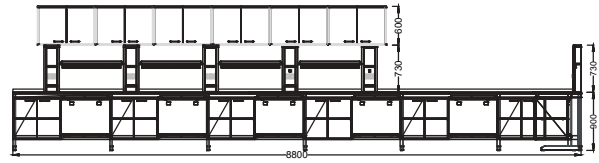
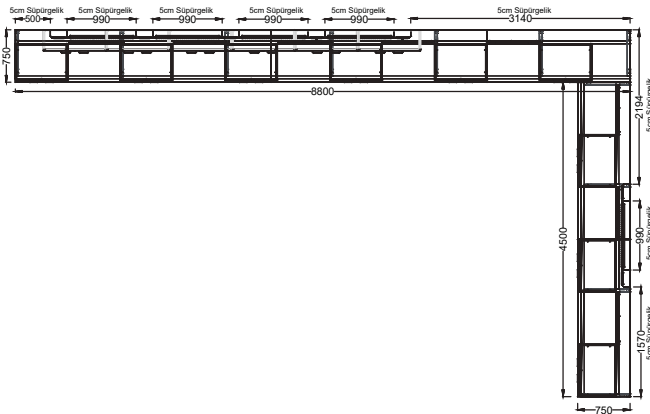
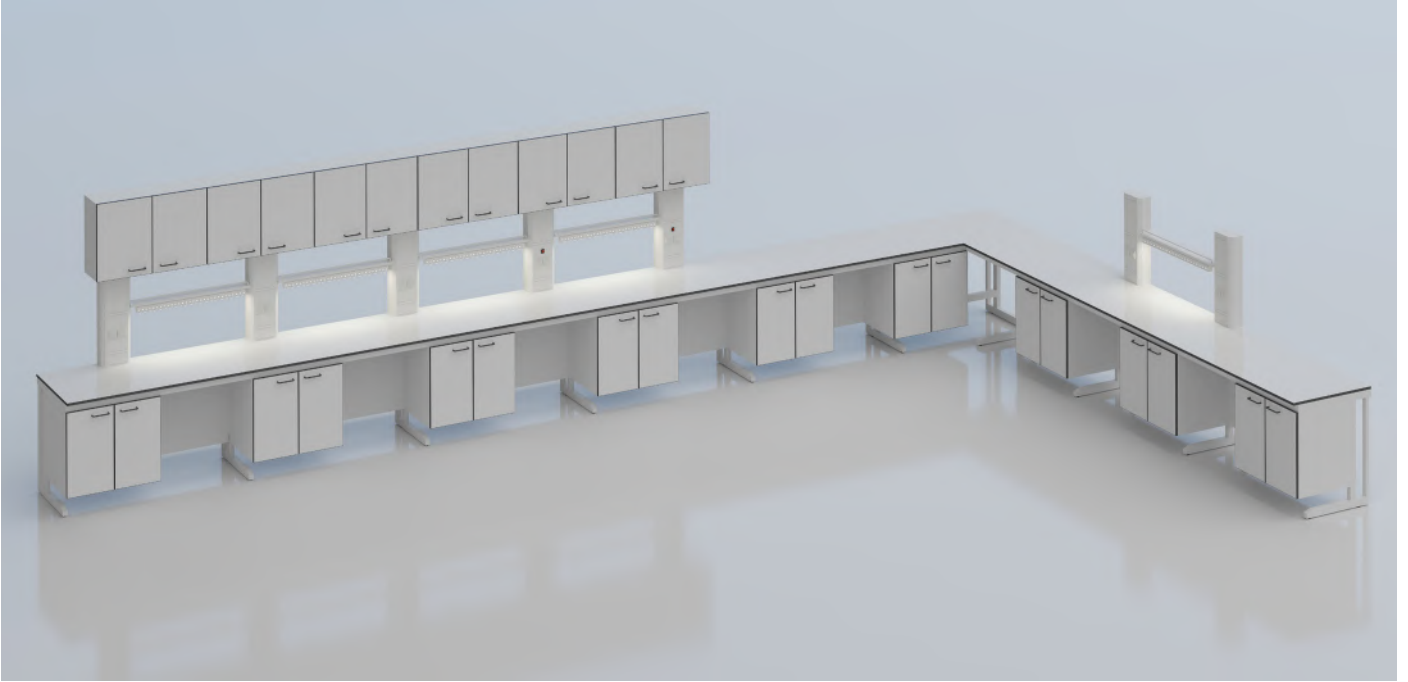




40\*60\*1.5 Profile C-Foot and Sleepers DKP  
Rear Leg Strut 20\*40\*1.5 Proof DKP  
16mm G-Lab Compact Work Floor  
18mm Mdf Base Cabinets.  
1 adjustable shelf in the lower cabinets.  
0.40mm PVC will be used in Cabinet Bodies and 2mm PVC  
in Cabinet Doors.-128 U Handle -Unpainted

Hinges Hafele 110°, with slower.  
1mm Galvanized Steel Energy Towers and racks  
1 x Led Lighting Lamp Under Shelf  
Two Schneider 220V-16 amps in each tower. Socket  
The work area gap will be covered with 1mm Galvanized steel sheet.  
33\*33 Polypropylene Sink-Plastifer  
Cold Tap - Broen

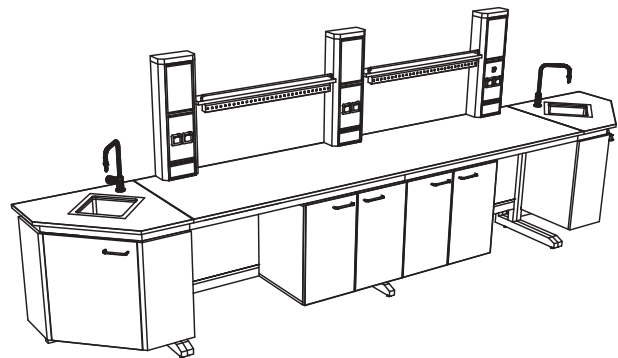
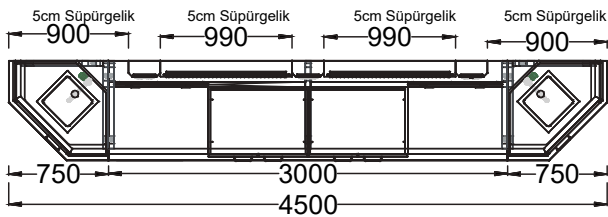
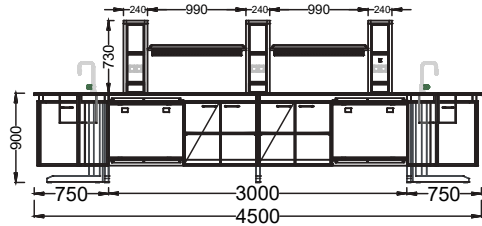
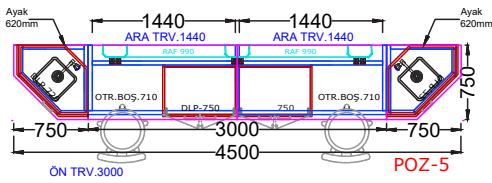




- 40\*60\*1.5 Profile C-Foot and Sleepers DKP
- Rear Leg Strut 20\*40\*1.5 Proof DKP
- 16mm G-Lab Compact Work Floor
- 18mm Mdf Upper and Lower Cabinets.
- 1 adjustable shelf in the lower and upper cabinets.
- 0.40mm PVC will be used in Cabinet Bodies and 2mm PVC in Cabinet Doors.

- 128 U Handle -Unpainted
- Hinges Hafele 110°, with slower.
- 1mm Galvanized Steel Energy Towers and racks
- 1 x Led Lighting Lamp Under Shelf
- Two Schneider 220V-16 amps in each tower. Socket
- The work area gap will be covered with 1mm Galvanized steel sheet.





- 40\*60\*1.5 Profile C-Foot and Sleepers DKP
- Rear Leg Strut 20\*40\*1.5 Proof DKP
- 16mm G-Lab Compact Work Floor
- 18mm Mdf Base Cabinets.
- 1 adjustable shelf in the lower cabinets.
- 0.40mm PVC will be used in Cabinet Bodies and 2mm PVC in Cabinet Doors.
- 128 U Handle -Unpainted

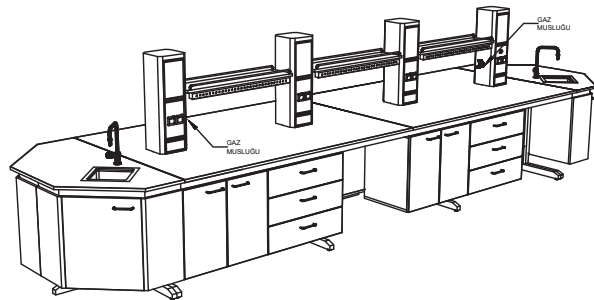
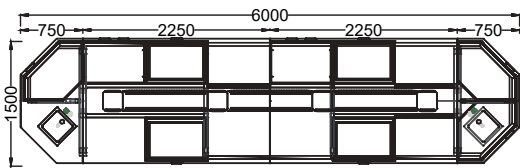
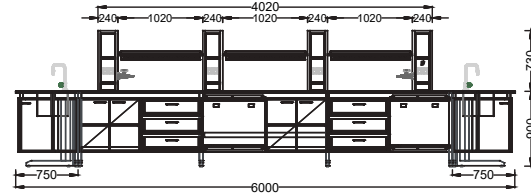
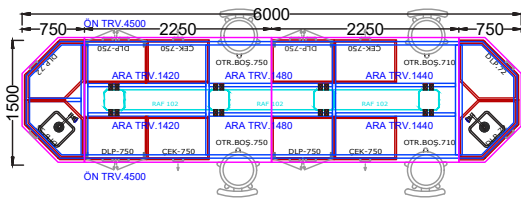
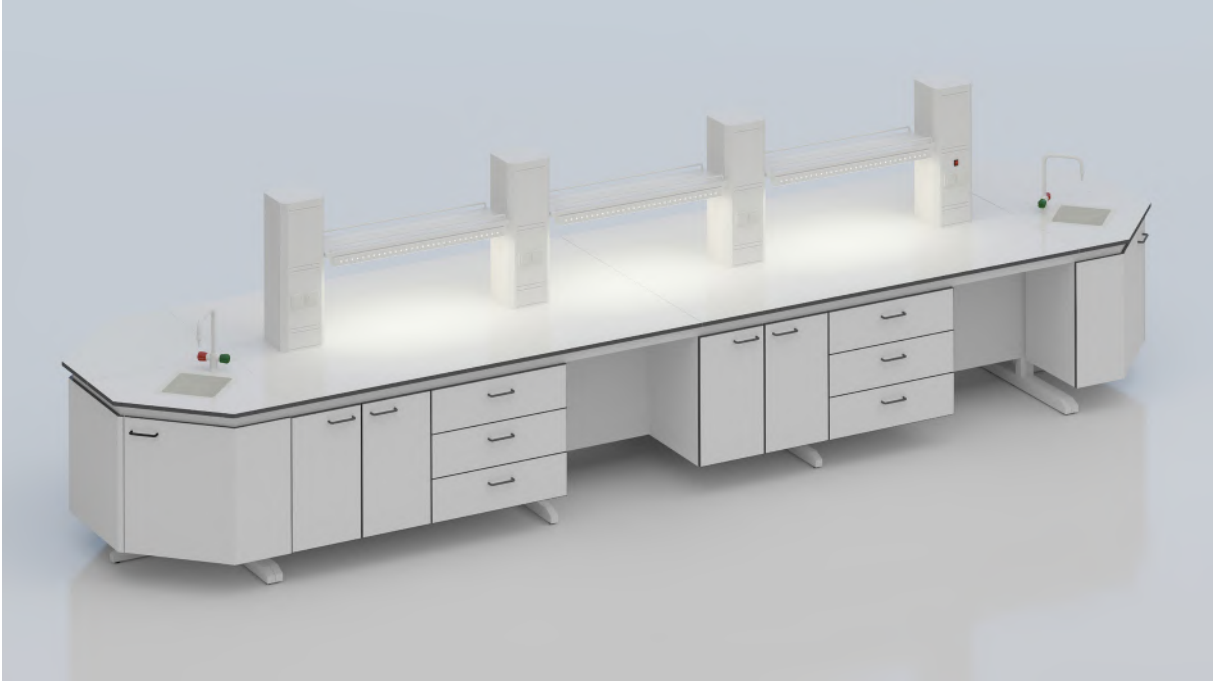
- Hinges Hafele 110°, with slower.
- 1mm Galvanized Steel Energy Towers and racks
- 1 x Led Lighting Lamp Under Shelf
- Two Schneider 220V-16 amps in each tower. Socket
- The work area gap will be covered with 1mm Galvanized steel sheet.
- 33\*33 Polypropylene Sink-Plastifer
- Cold Tap - Broen







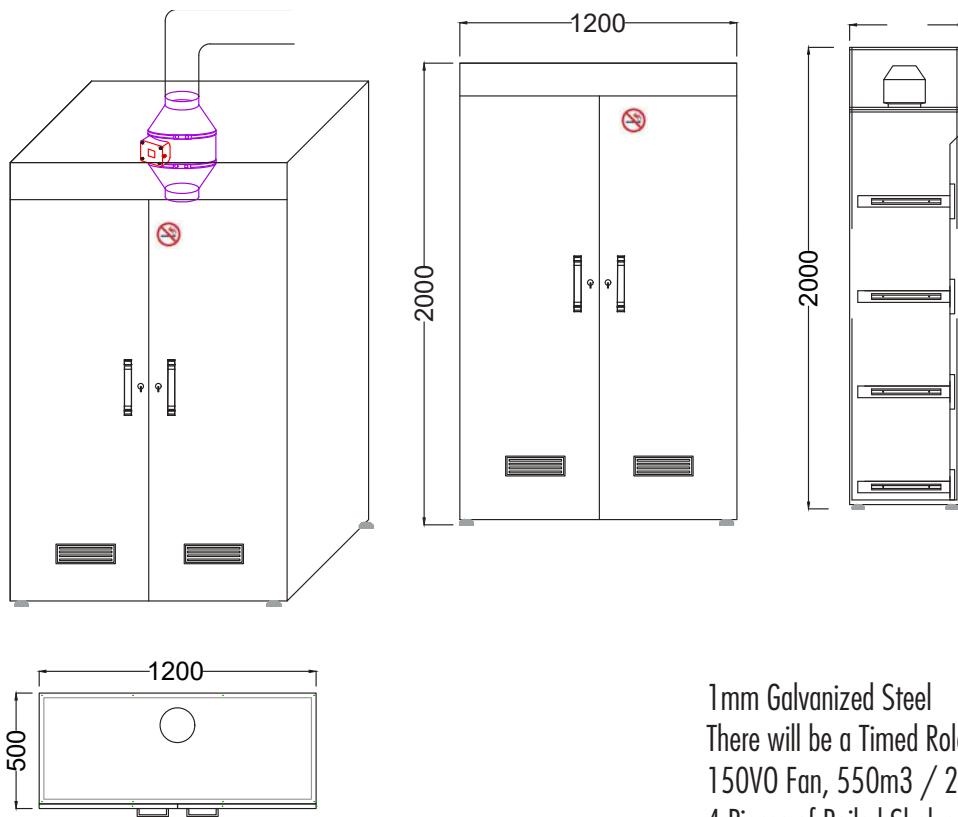




- 40\*60\*1.5 Profile C-Foot and Sleepers DKP
- Rear Leg Strut 20\*40\*1.5 Proof DKP
- 16mm G-Lab Compact Work Floor
- 18mm Mdf Base Cabinets.
- 1 adjustable shelf in the lower cabinets.
- 0.40mm PVC will be used in Cabinet Bodies and 2mm PVC in Cabinet Doors.
- 128 U Handle -Unpainted
- Hinges Hafele 110°, with slower.

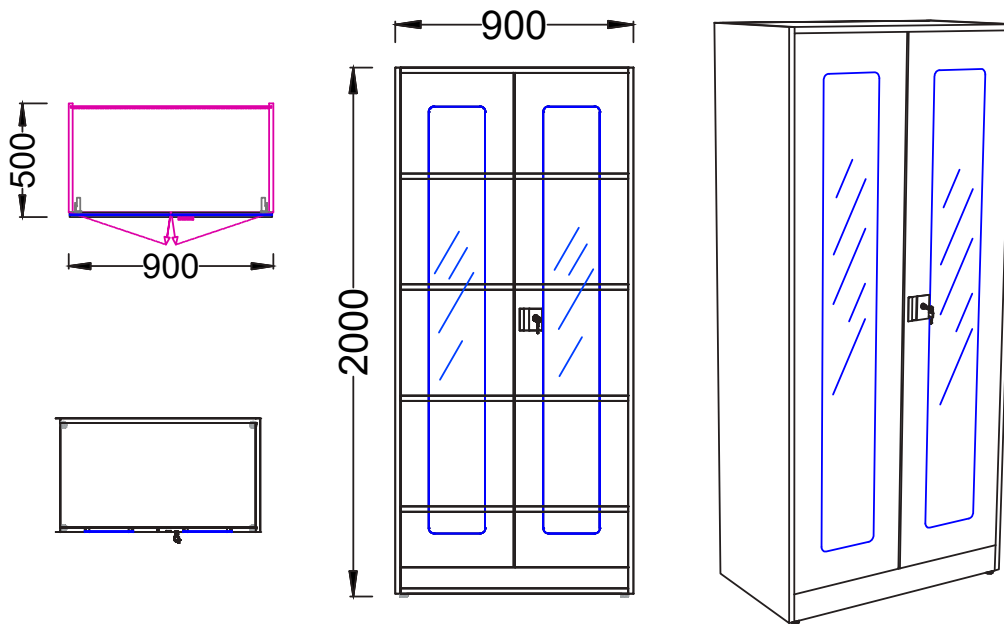
- 1mm Galvanized Steel Energy Towers and racks
- 1 x Led Lighting Lamp Under Shelf
- Two Schneider 220V-16 amps in each tower. Socket
- The work area gap will be covered with 1mm Galvanized steel sheet.
- 33\*33 Polypropylene Sink-Plastifer
- Cold Tap - Broen





1mm Galvanized Steel  
There will be a Timed Role  
150VO Fan, 550m3 / 2 Fans  
4 Pieces of Railed Shelves with PP Pan inside the shelf

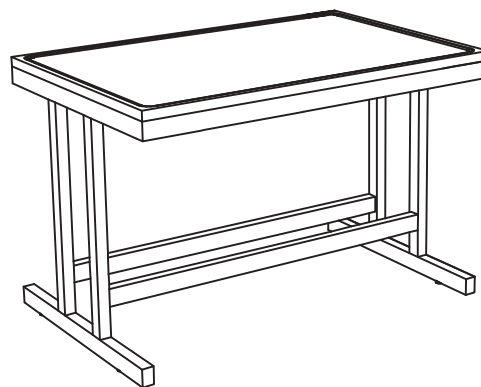
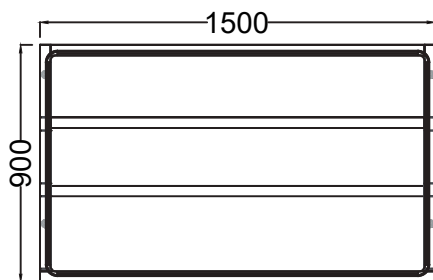
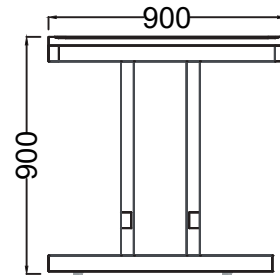
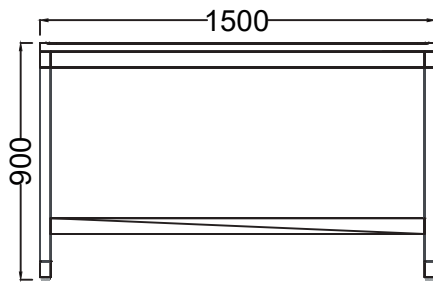




- It will be produced from -0.80mm DKP Sheet.
- Cabinet Doors will be made of double layer sheet metal bending.
  - Tampered 4mm glass will be used on the cabinet doors.
  - There will be a triple lock system on the cabinet doors.
  - Handle Special Recessed.

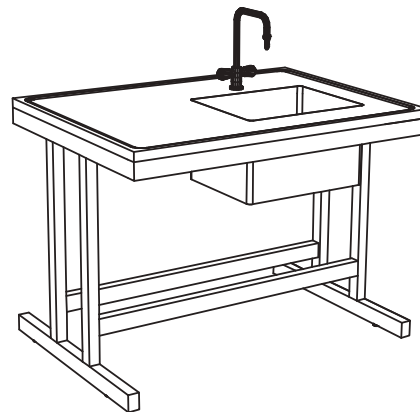
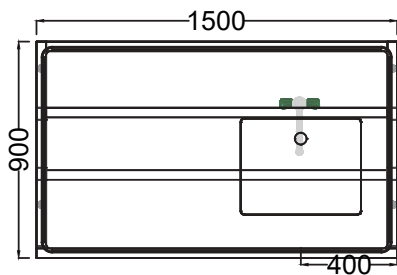
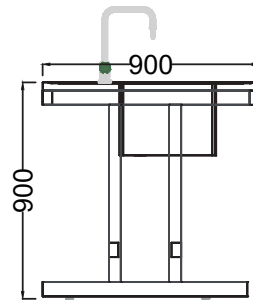
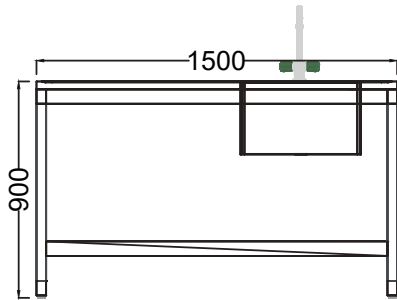
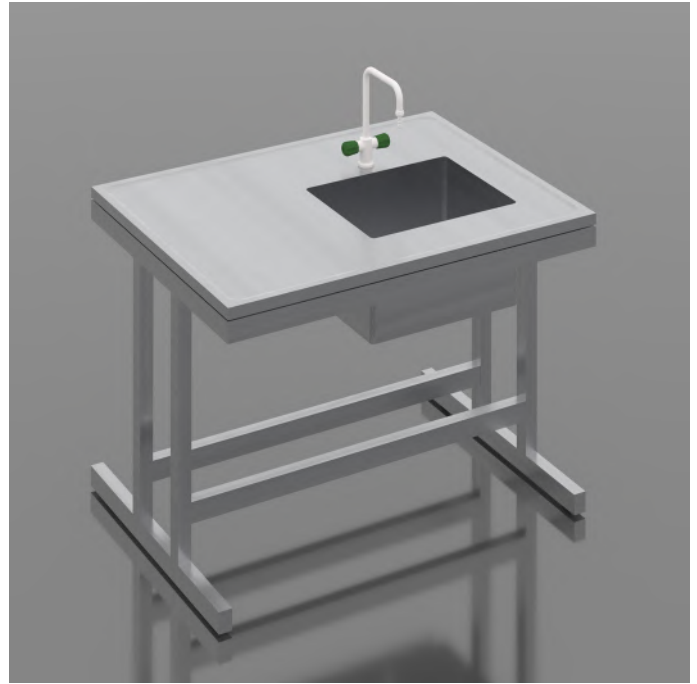
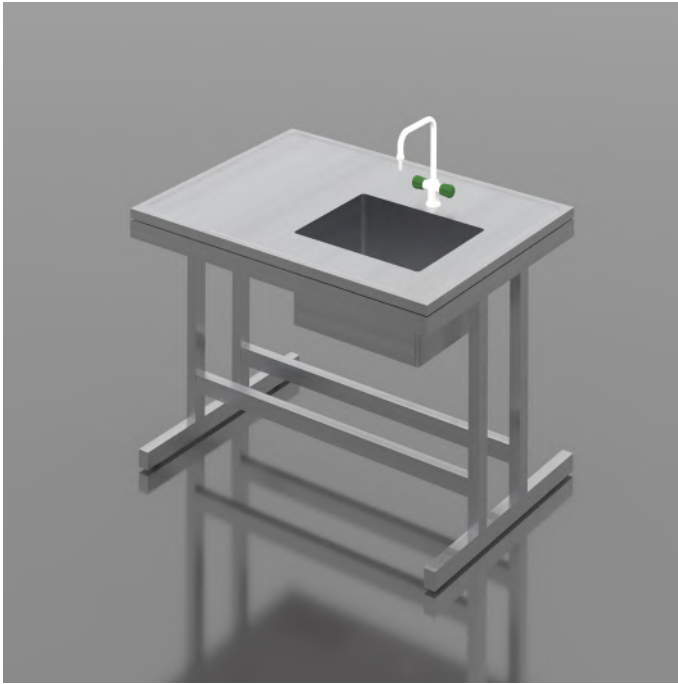






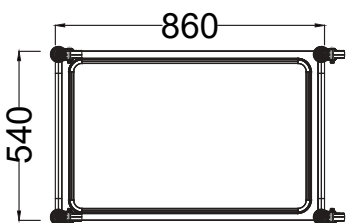
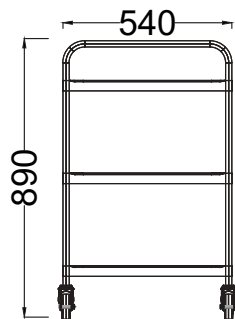
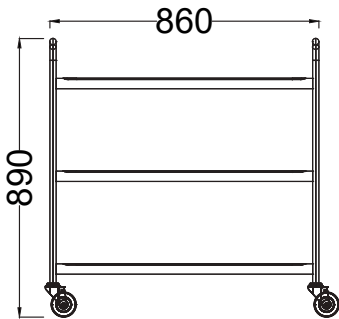
40\*60\*2 Profile Stainless C-Foot and Sleepers  
2mm Stainless Steel Working Floor- 33mm Height with Self Cockpit.  
All screws to be used in stainless products should be stainless





40\*60\*2 Profile Stainless C-Foot and Sleepers  
2mm Stainless Steel Working Floor- 33mm Height with Self Cockpit  
500\*400 Stainless Steel Sink  
Hot Cold Double Tap-Broen.  
All screws to be used in stainless products should be stainless.





1.2mm Stainless Steel

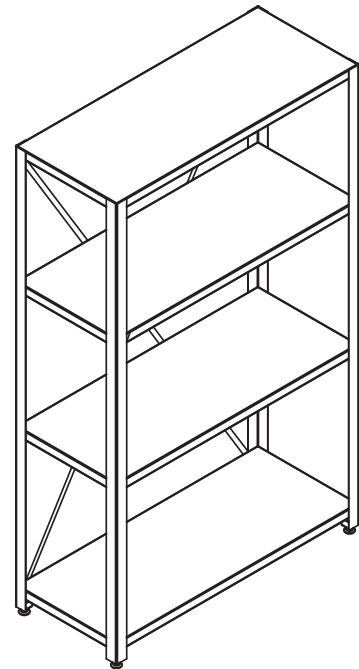
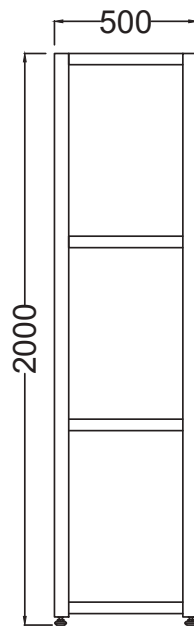
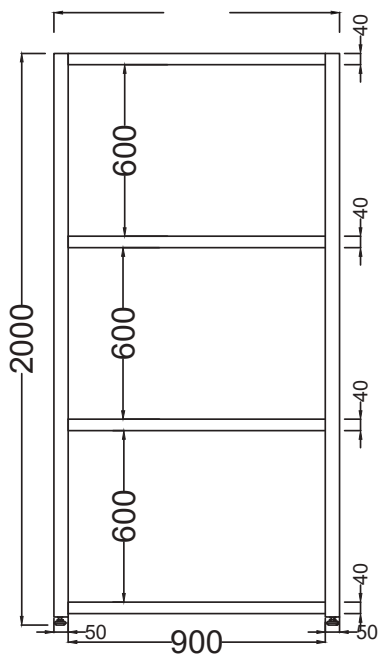
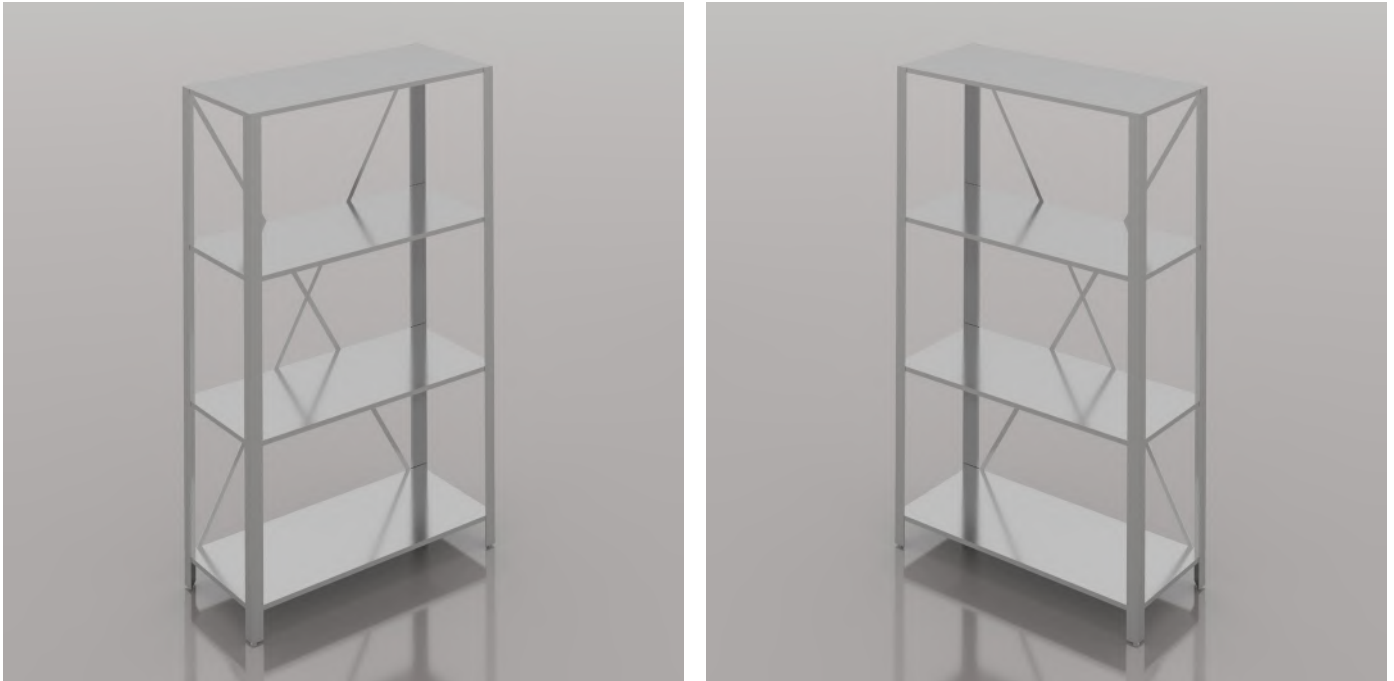
3 pieces of rack with Stainless cockpit.

2 pcs. Brake, 2 pcs. Unbraked Wheel

30mm Stainless Pipe.

All screws to be used in stainless products should be stainless

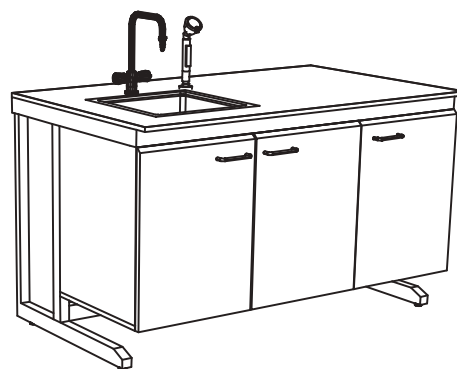
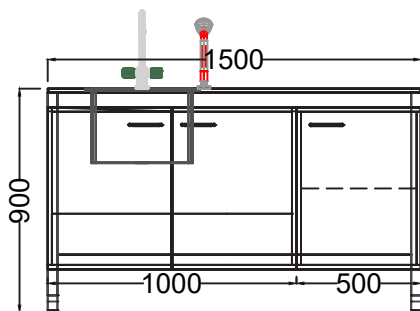
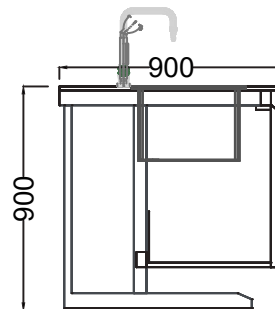
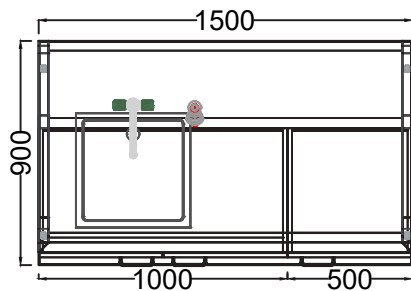




L Profile Made of Stainless Rear Cross Registered  
 2mm Stainless Steel Shelving System  
 There should be horizontal support under the shelf.  
 Shelves will be fixed.  
 All screws to be used in stainless products should be stainless



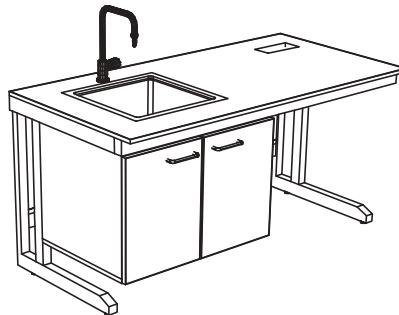
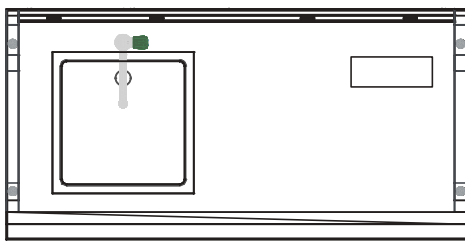
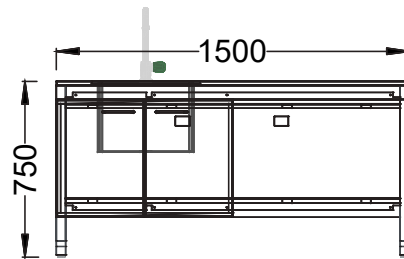




40\*40 Polypropylene Sink-Plastifer  
 Hot Cold Double Tap - Broen  
 Single Eye Shower Broen  
 40\*60\*1.5 Profile C-Foot and Sleepers DKP  
 Rear Leg Strut 20\*40\*1.5 Proof DKP

16mm G-Lab Compact Work Floor - Gray  
 1mm Galvanized Steel Sink Cabinet (Double Walled Doors)  
 1 adjustable shelf in Single Door Cabinets.  
 128 U Handle -Unpainted  
 Hinges Hafele 110°, retarder

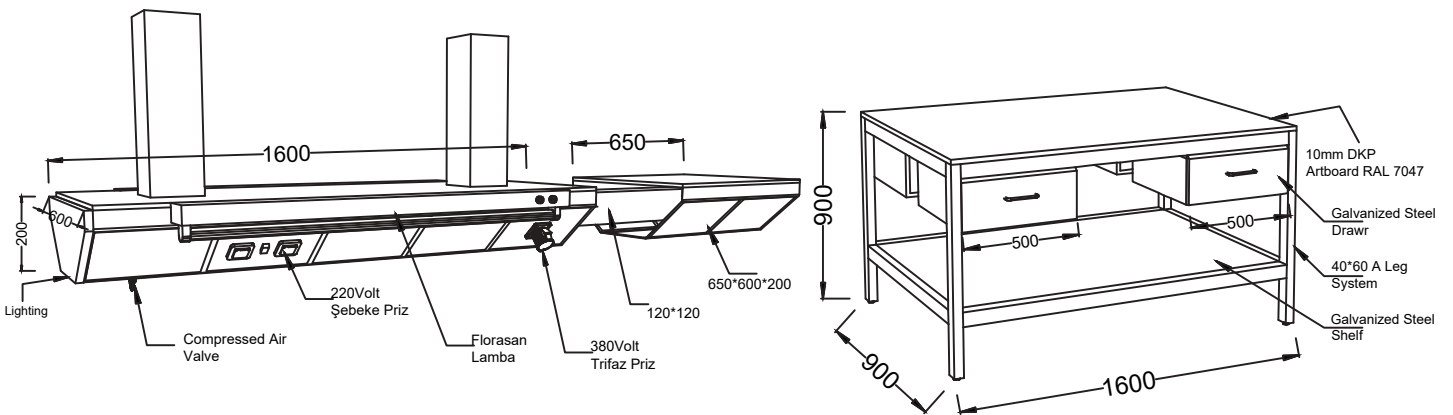




- 40\*60\*1.5 Profile C-Foot and Sleepers DK -Rear Leg Strut
- 20\*40\*1.5 Proof DKP
- 16mm G-Lab Compact Work Floor
- 18mm Mdf Base Cabinets.
- 0.40mm PVC will be used in Cabinet Bodies and
- 2mm PVC in Cabinet Doors.
- 128 U Handle -Unpainted

- Hinges Hafele 110°, with slower.
- The work area gap will be covered with
- 1mm Galvanized steel sheet.
- 46\*46 Polypropylene Sink-Plastifer
- Cold Tap - Broen





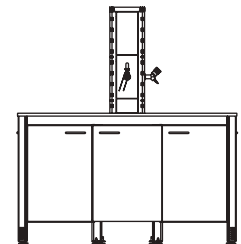
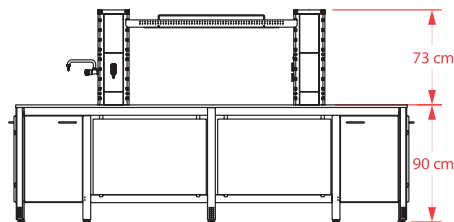
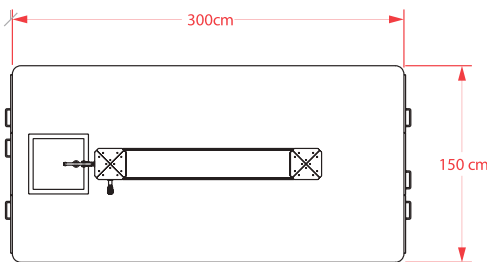
#### \* Work Bench

- 40\*60\*1.5 Profile A-Foot and Sleepers DKP
- 10mm DKP Sheet Electrostatic Painted Work Floor
- 1mm Galvanized Steel Single Drawer (Double Walled Doors)
- 128 U Handle -Unpainted
- Drawer rails Hafele, with slower.

#### \* Suspended Energy Tower

- The whole body and covers will be electrostatic painted on 1mm Galvanized Sheet -There will be 4 220Volt Sockets and 2 380Volt Sockets in each unit. Each unit will have 2 spotlights and 2 fluorescent led lighting. Each unit will have 1 compressed air tap.
- There will be 2 ceiling connection columns in each unit.
- The inner part of the connection columns will be 40\*40\*1.5mm DKP Profile, the outer coating will be Component 123 1mm Galvanized sheet.





### Working Surface;

Chemical laminated compact: it is chemical resistant laminated compact based on EN438 standards.

### Accessories:

The mountable equipment column, water fittings are according to international standards DIN12898, EN13792:2000, 180228/1 and DIN12918

The mountable equipment column, gas fittings are according to international standards DIN12898, EN13792:2000, 180228/1 ve DIN1'2918

Electric Sockets; are 220V 16A and compatible with the below standards

Electric sockets: compatible with "VDIN VDE 0620-1 (VDE 0620-1):2005-04" Standards

Electric sockets: compatible with "DIN49440 VE IEC 60884-1" Standards

Electronic Sockets: can be mounted as shown in plan over installment tap, in four groups. Electric Sockets are thermoplastic.

### Shelves

The horizontal shelves in Tesisat are 2mm ( $\pm 0.5$ mm) galvanized steel material.

Horizontal shelves will have 150cm length and 5cm thickness and will be between two TESISAT Column.

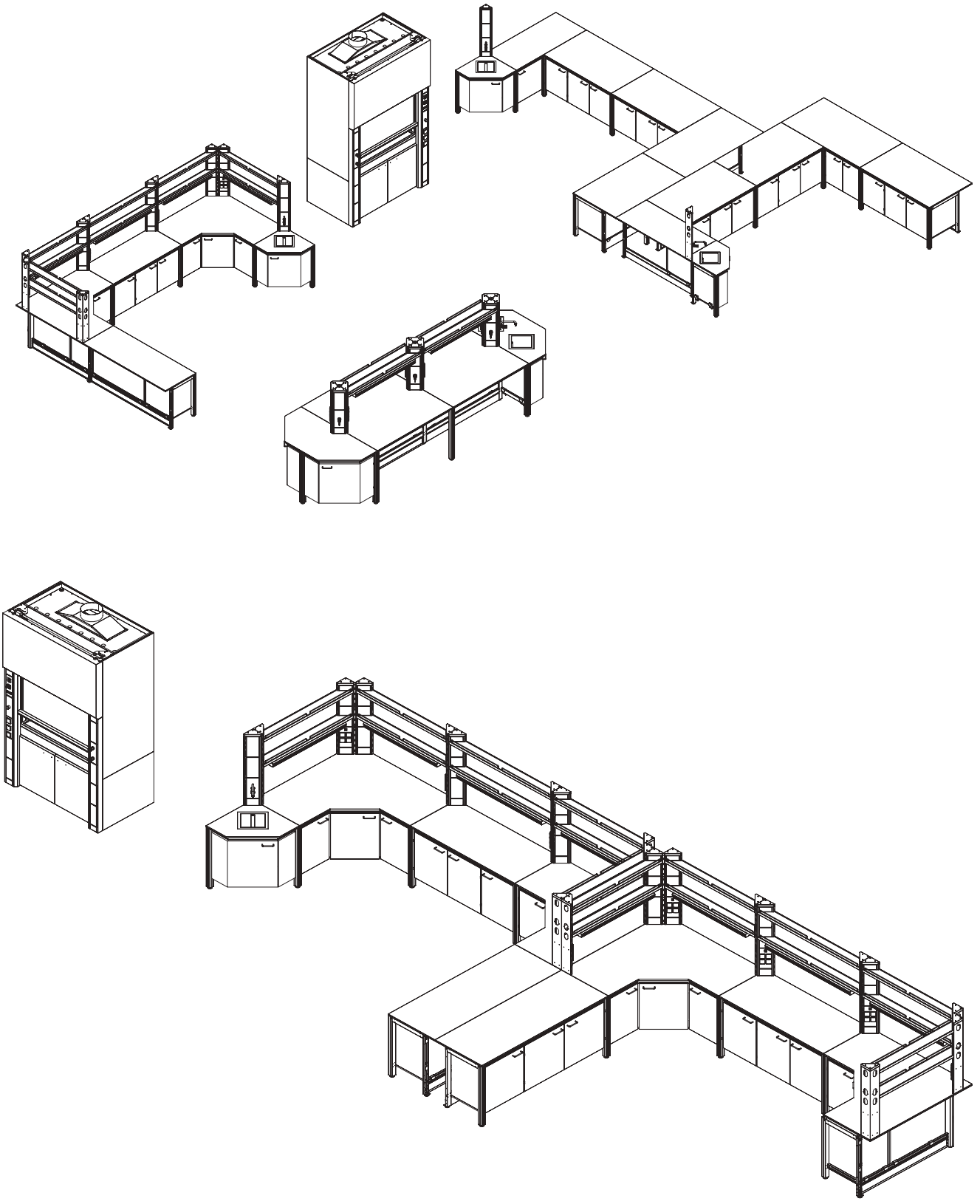
The connection of horizontal shelf with column is not visible and demounted, also there are holes for cables. Under the horizontal shelves there are space for LED light. The shelf below is 3cm over table.

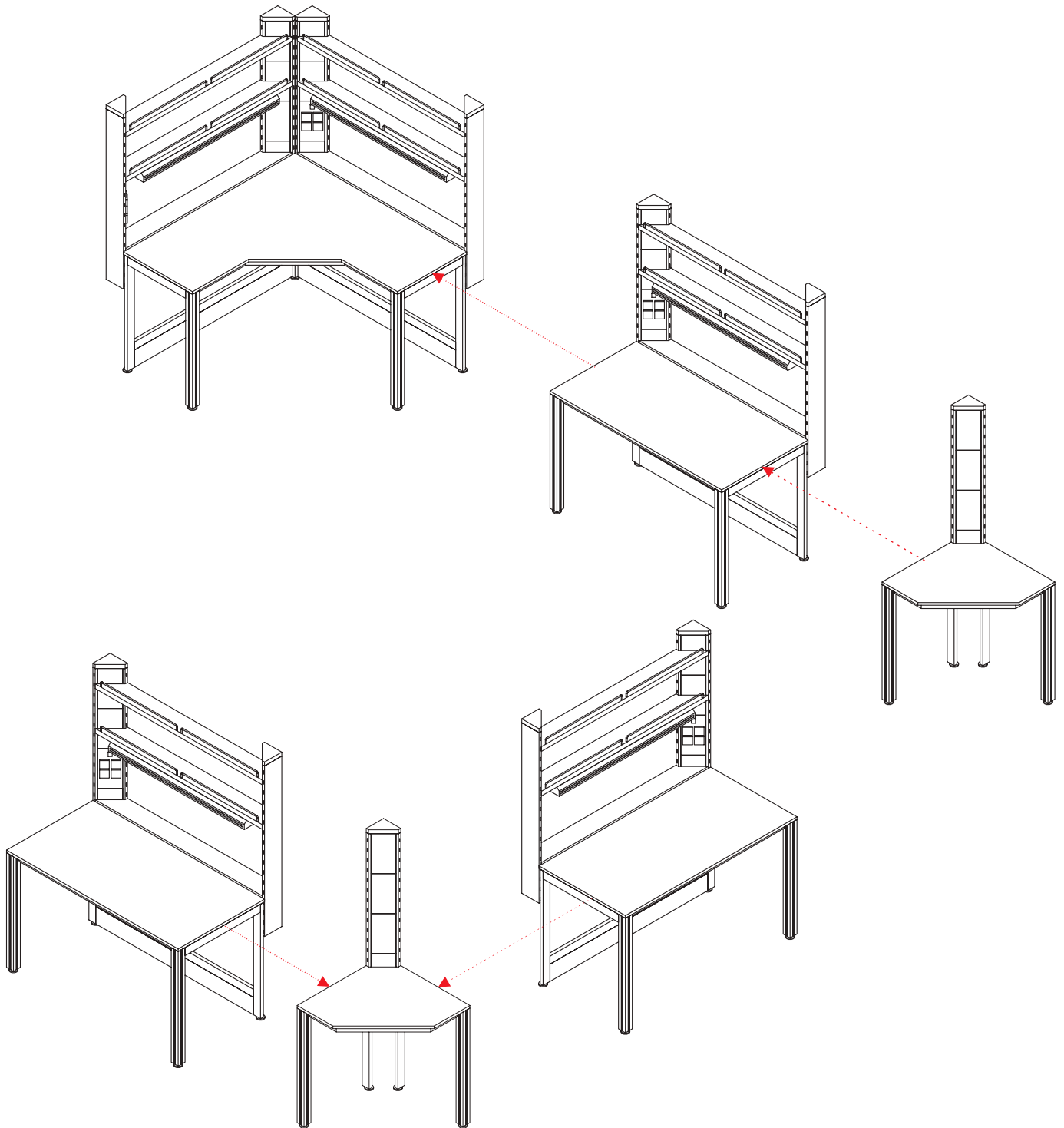
Cabinet system mm E MDF laminated the doors of the cabinets are

The cabinet are made of 2mm and the edges are made of 0.40mm PVC. The cabinets are manufactured in modular way and it can be demounted without use of any electronic equipment. Also it can have wheels. Cabinet doors have chrome covered horizontal handles.















Handwritten notes on a whiteboard discussing gravity, spacetime, and related concepts. The text includes:

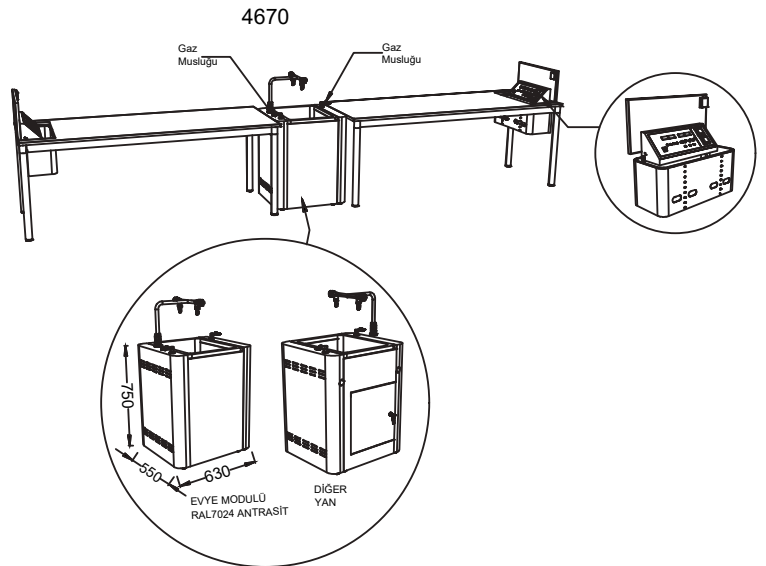
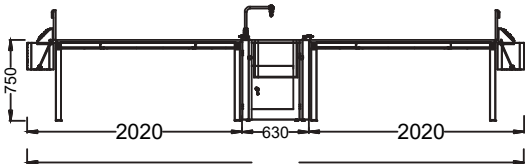
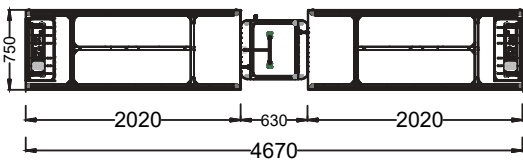
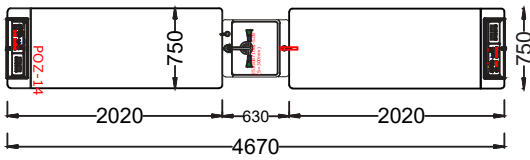
- Gravitational "turbulence"?
- Gravitational "turbulence"?
- GRAVITATIONAL PROPAGATION?
- NONLINEAR GRAVITY LATER??
- NEGATIVE MASS??  $T_{\mu\nu} = (\rho + p)u_\mu u_\nu + p g_{\mu\nu}$
- SPACETIME SURFACE?
- FLANGE METAMATERIAL?

Mathematical expressions and diagrams are scattered throughout the text, including:

- $\frac{\partial^2 \phi}{\partial t^2} = -\nabla^2 \phi$
- $\frac{\partial^2 \phi}{\partial t^2} = -\nabla^2 \phi + \frac{1}{2} \nabla^2 \phi^2$
- $\frac{\partial^2 \phi}{\partial t^2} = -\nabla^2 \phi + \frac{1}{2} \nabla^2 \phi^2 + \frac{1}{6} \nabla^2 \phi^3$
- $\frac{\partial^2 \phi}{\partial t^2} = -\nabla^2 \phi + \frac{1}{2} \nabla^2 \phi^2 + \frac{1}{6} \nabla^2 \phi^3 + \frac{1}{24} \nabla^2 \phi^4$
- $\frac{\partial^2 \phi}{\partial t^2} = -\nabla^2 \phi + \frac{1}{2} \nabla^2 \phi^2 + \frac{1}{6} \nabla^2 \phi^3 + \frac{1}{24} \nabla^2 \phi^4 + \frac{1}{720} \nabla^2 \phi^5$
- $\frac{\partial^2 \phi}{\partial t^2} = -\nabla^2 \phi + \frac{1}{2} \nabla^2 \phi^2 + \frac{1}{6} \nabla^2 \phi^3 + \frac{1}{24} \nabla^2 \phi^4 + \frac{1}{720} \nabla^2 \phi^5 + \frac{1}{30240} \nabla^2 \phi^6$
- $\frac{\partial^2 \phi}{\partial t^2} = -\nabla^2 \phi + \frac{1}{2} \nabla^2 \phi^2 + \frac{1}{6} \nabla^2 \phi^3 + \frac{1}{24} \nabla^2 \phi^4 + \frac{1}{720} \nabla^2 \phi^5 + \frac{1}{30240} \nabla^2 \phi^6 + \frac{1}{362880} \nabla^2 \phi^7$
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- $\frac{\partial^2 \phi}{\partial t^2} = -\nabla^2 \phi + \frac{1}{2} \nabla^2 \phi^2 + \frac{1}{6} \nabla^2 \phi^3 + \frac{1}{24} \nabla^2 \phi^4 + \frac{1}{720} \nabla^2 \phi^5 + \frac{1}{30240} \nabla^2 \phi^6 + \frac{1}{362880} \nabla^2 \phi^7 + \frac{1}{4790016} \nabla^2 \phi^8 + \frac{1}{63521280} \nabla^2 \phi^9 + \frac{1}{816480000} \nabla^2 \phi^{10}$

# COLLEGE LAB FURNITURE

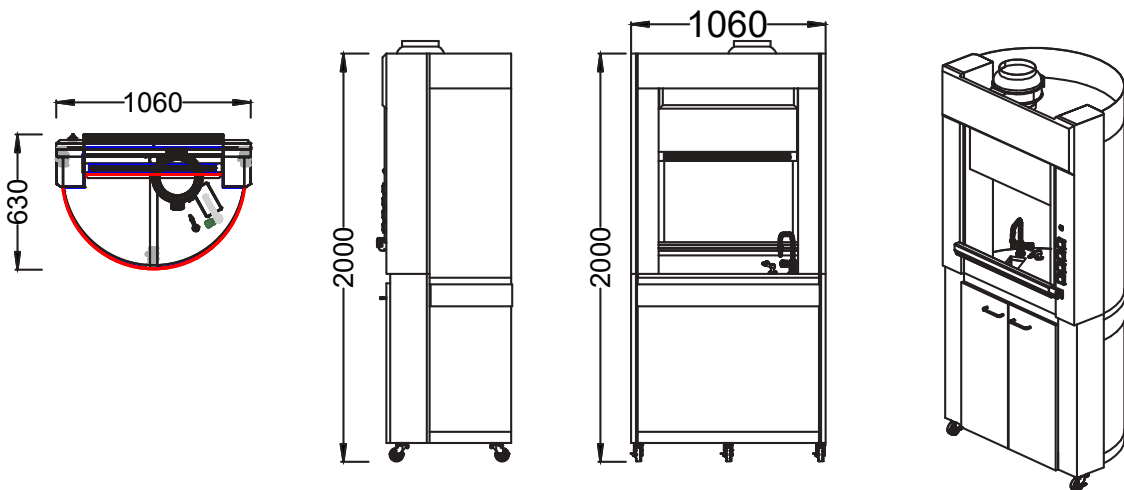




16mm anti acid compact - white  
 Metal legs and all crossbars Ral 9003 White  
 Electric duct body and covers Ral 9003 White  
 Sink module Ral 7024 Anthracite  
 Sink 550\*450 Ceramic  
 Broen faucets with double outlet

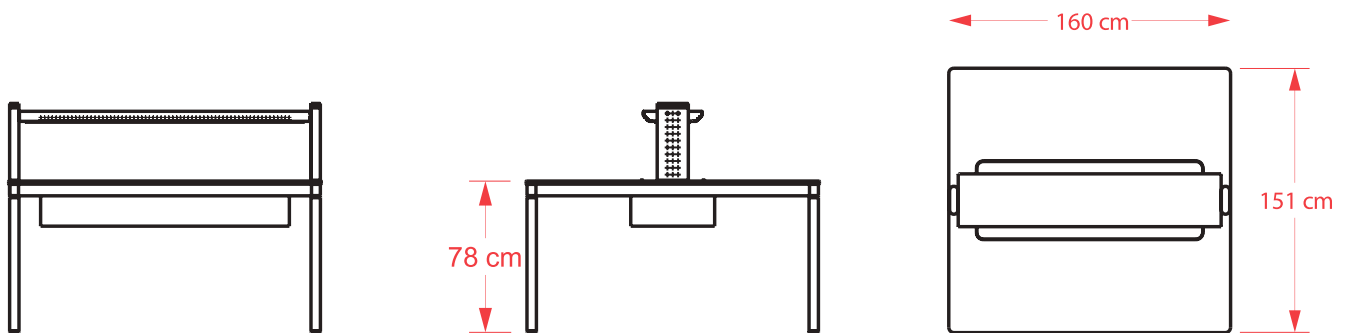






Working Surface Ceramic - White  
-Metal Leg and All Metal Parts Ral 9003 White





There are two power resource AC and DC on the device shown by digital indicator. Every sign AC and DC shows the power flow as A-V button as ampere and volt. Every indicator can work as ampere meter and voltmeter. It can be chosen as A/V button mode by the touch button next to indicator, the selected mode is shown as A and V with the LED lights near indicator.

The short circuit and overcurrent imported by AC or DC is shown on warning LED light.

DC output; between 0-24 V DC voltages, between 0-3A current.

Output is very sensitive and can be controlled by up/down button.

On DC panel once the voltage mode has been selected, it appears on voltage digital screen.

There is one button for output current/flow DC power resource adjusts the current from 0-3 ampere.

If the current is over loaded the system cuts the connection and gives warning through the overcurrent LED. If overcurrent has been led out of the power resource for longer time, device cuts the output voltage automatically to get it back to normal the up/down buttons should be used.

DC power resource has protection property against short circuit or overcurrent.

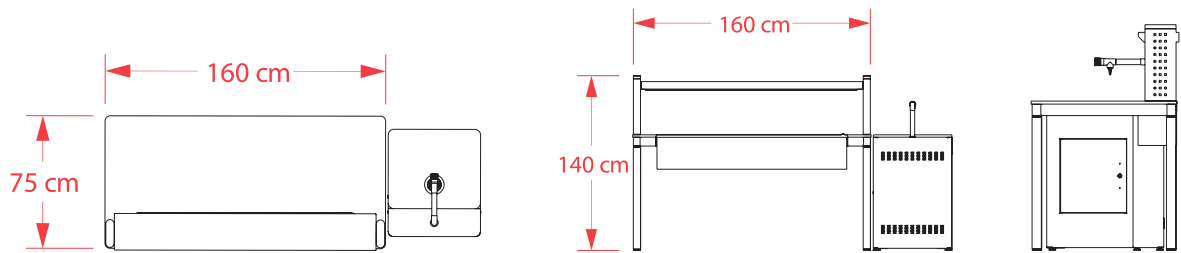
AC output; can provide from 0-24v DC voltage and 0.3A current.

After selecting voltage mode from AC panel, it will be appeared on digital screen.

After voltage adjustments to protect output from voltage fluctuation it delay 1 to 2 seconds.

Symmetric DC output; power resource between +12V and -12V has symmetrical power output.





### Table Top ( Chemical Compact)

According to EN 438 standards the table is "Chemical Compact Laminated".

The table steel hitch connection. With the help of peg and bolt it is easy to demount and the spaces between two points is maximum 60cm.

The table steel hitch connection; a hole on compact's surface has been made by driller and with the help of screw it can be demounted also the space between two points is 60cm.

### Carrier System

Horizontal and vertical carrier are demountable. Oscillation is at maximum level.

### Sink and Water System

Ceramic sink with dimension of 53x46.

### Gas Fitting

Gas fitting is according to international standards DIN12898, EN13792:2000, ISO228/1 ve DIN12918

### Water Fitting

The water and gas fittings on the table are according to the international standards of DIN12898, EN13792:2000, ISO228/1 ve DIN12918

### Electric Sockets

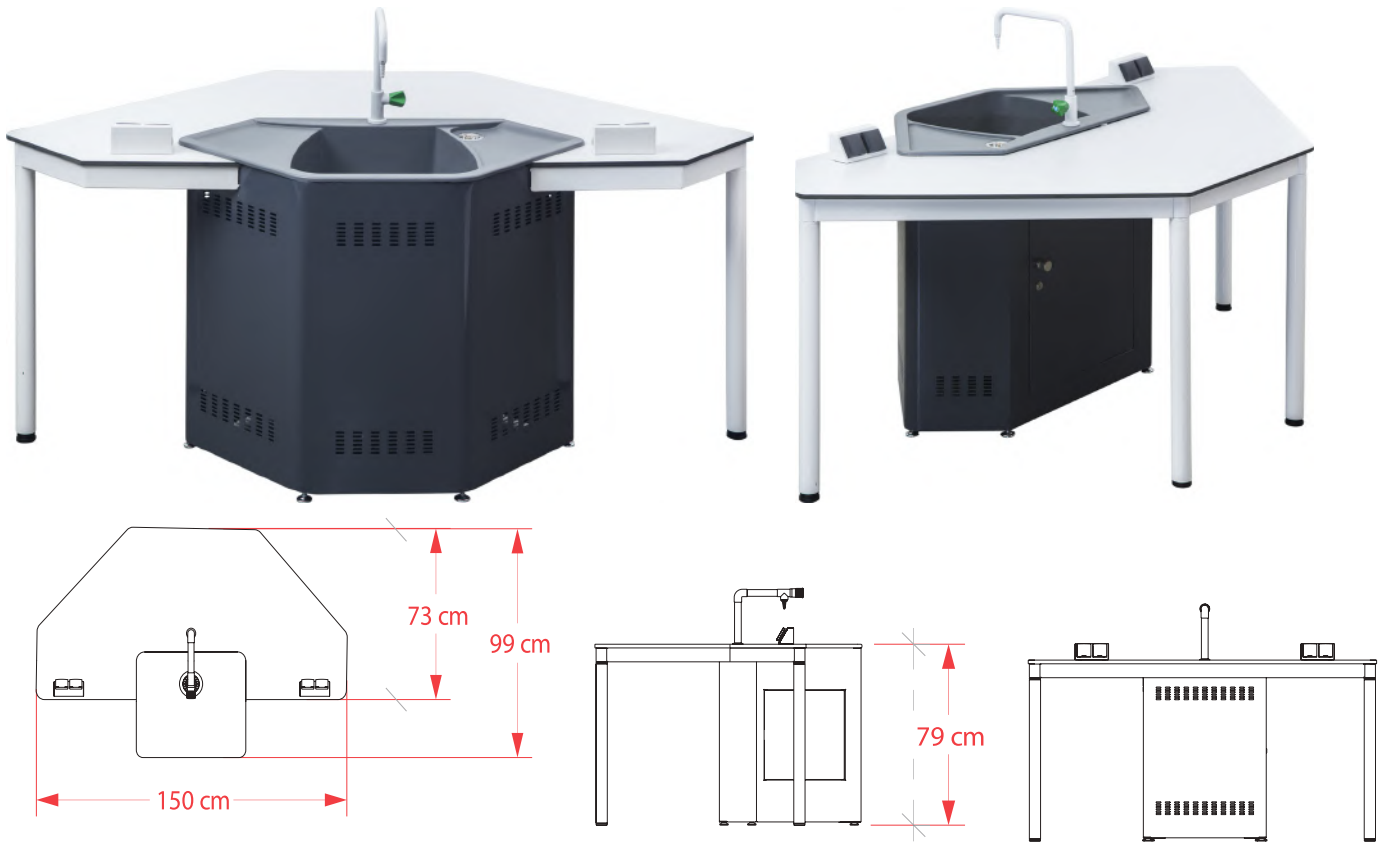
It is compatible to 220V 16A and also below mentioned standards.

Electric Sockets, Compatible with "TVDIN VDE 0620-1 (VDE 0620-1):2005-04"

Electric Sockets, compatible with "DIN49440 VE IEC 60884-1"

Electric sockets are manufactured with thermoplastic raw materials.





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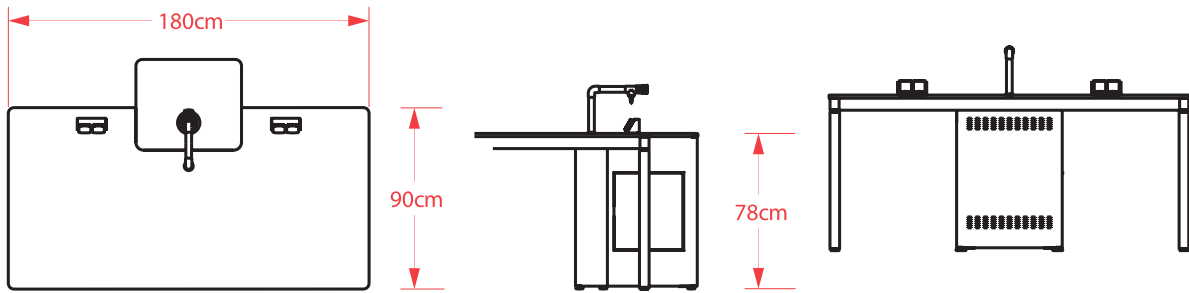
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Ideal for the safe storage of compressed gas cylinders in the laboratory.  
 Proven fire resistance (type 90) compliant with EN 14470-2  
 Fulfilling the requirements of TRGS 510  
 GS certified  
 Safety lock that visually displays the lock status  
 integrated connection to the air intake system  
 Doors and body are double walled and heat insulated



Eye wash shower Foot operated, Body shower Hand operated  
 Suitable to be attached to the ground with its own footplate  
 Shower bowl stainless steel 300 mm  
 All pipes are made of stainless steel

Pipes Body : 1 1/4" Stainless Steel  
 Water Inlet : 1" (One Finger)  
 Shower Bowl Stainless Steel: Diameter 300 mm  
 ABS: Diameter 250 mm - Color Yellow or Green  
 Water Flow min 11.5 lt/min (Eyewash)  
 min 75 lt/min (Body Shower)  
 Weight Stainless Steel :16 kg



Eye Shower  
 It is hand operated, it is suitable to be attached to the wall with a safe.  
 All pipes are made of stainless steel.  
 shower bowl stainless steel  
 Standards EN 15154 - 2

Pipes Body : 1 1/4" Stainless Steel  
 Water Inlet : 1/2" (Half Finger)  
 Water Outlet: 1 1/2"  
 Shower Bowl Stainless Steel : Diameter 300 mm  
 ABS: Diameter 250 mm - Color Yellow or Green  
 Water Flow min 11,5 lt / min  
 Weight Stainless Steel : 5,950 kg















