

Technical specification

1.SPECIFICATION OF APRON LOCKER CABINET



1 Technical Specifications

- 1.1 Apron locker should be made up of SS 304 /18 swg
- 1.2 Should have provision for 12 nos of separate lockers for Aprons
- 1.3 Should be aesthetically beautiful.
- 1.4 Dimension : 900 mm High X 1500 mm wide X 500 mm deep.

2.SPECIFICATION OF BIOLOGICAL SAFETY CABINET

1 Description of Function

1.1 Bio safety cabinets are used to provide primary containment in the laboratory when the investigator is using potentially infectious materials.

2 Operational Requirements

2.1 Protection for operator, environment and the product, from aerosols and microorganisms

2.2 Microprocessor/Microcontroller/Microcomputer controlled system.

3 Technical Specifications

3.1 Outer Body made of SS 304 (dimensions 1800 mmX600 mm) .

3.2 HEPA filters with 99.999% efficiency for particles \geq 0.3 μ m (H14 class according to EN1822)

3.3 Automatic speed compensation system against clogged main HEPA filter Pre-filtration unit with retention of 10 to 15 micro meter

3.4 Air Circulation to vertical with 30% exhaust and 70% recirculation

3.5 Single stainless steel perforated working platform

3.6 Alarms for power failure and door opening

3.7 Should be fitted with UV light > 800 lux

3.8 High-speed centrifugal blower with lifetime lubricated

3.9 Noise level <58dBA, Elapsed hour counter

3.10 DOP test outlet

3.11 Fluorescent lamp to obtain powerful glare-free lighting

3.11 On site installation and appropriate certificate to be provided

3.12 On/Off switch with key lock.

3.13 Gas connection should be provided in the cabinet

3.SPECIFICATION OF FIRST AID BOX



- 1.1 First Aid box frame should be made up of SS 304.
- 1.2 It should be designed to protect the contents.
- 1.3 All boxes should be clearly marked as per international standards
- 1.4 Should be provided with lock and key
- 1.5 Dimension : 400 mm X 150 mm X 500 mm

4.SPECIFICATION OF AUTOMATIC DISINFECTANT DISPENSER



- 1.1 Should be automatic disinfectant Dispenser
- 1.2 Body should be made up of SS 304
- 1.3 Capacity : 1000 ml

5.SPECIFICATION OF DRAIN TRAP-SS 304



- 1.1 Drain tap suitable for pharmaceutical application
- 1.2 Should be made up of SS 304
- 1.3 Drain tap with bottom side vertical outlet(Single seal)
- 1.4 Dimension : Standard dimension

6.SPECIFICATION OF CROSS OVER BENCH WITH SHOE RACK



- 1.1 Should be made up of SS 304
- 1.2 Seating space should be such that it should accommodate three persons.

- 1.3 Should have shoe rack underside of the bench
- 1.4 Dimension : 1000 mm X 400 mm x 550 m

7.SPECIFICATION OF LEG DRYER

- 1.1 Should be automatic leg dryer
- 1.2 Body should be made up of SS 304
- 1.3 Should be suitable for laboratory change area
- 1.4 Auto cut off function
- 1.5 Dimension : Standard

8.SPECIFICATION OF HAND DRYER

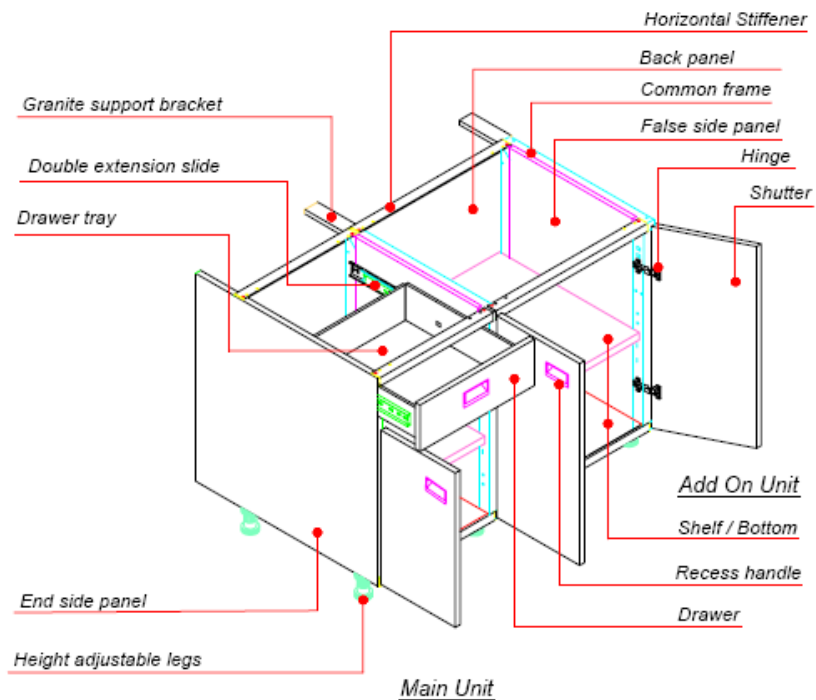
- 1.1 Should be automatic hand dryer
- 1.2 Body should be made up of SS 304
- 1.3 Blowing Volume of 120 m³/hr
- 1.4 Sensing range should be 25 ± 5 cm
- 1.5 Drying time should be less than 30 second
- 1.6 Auto cut off after one minute should be available.
- 1.7 Power Supply: 230 V,50 Hz AC supply.
- 1.8 Should be supplied with all accessories for fixing the hand dryer

9.SPECIFICATION OF SS MIRROR FRAME-450 X 1500 mm

- 1.1 Mirror frame should be made up of SS 304
- 1.2 Dimension : 450 mm X 1500 mm

10.SPECIFICATION OF LABORATORY WORKTABLE

In this type, storages should be the combination of vertical and horizontal frames of varying width standing on height adjustable legs, each having a load carrying capacity of 450 kgs



Laboratory Work bench comprises of following components:

- Storage Cabinets
- Reagent Shelf
- Work Surfaces.
- Sink units.

1. Storage Cabinets:

A complete modular type storage cabinet should consist of Cabinet Frame, Cover panels, metal/ wooden shutters & drawers, support brackets, shelves, slides and handles.

Cabinet Frame:

Frame is a combination of 1.2 mm horizontal or stiffeners and 0.8 mm vertical panel of CRCA MS sheet.

Cover Panels:

End side panel, false panel and back panel of 0.8 mm thick CRCA MS sheet.

Shutters:

Metal Shutters are of 0.8mm thick CRCA MS sheet and 40-50 microns pure epoxy powder coated. It should be aesthetically beautiful and easily cleanable.

Wooden shutters are made up of 18mm thick MDF with 0.4 mm PVC film on front

surface. It should have good scratch resistance, reasonable chemical resistance to acids, alkalis, organic solvents and heat resistance properties. These shutters can also be offered in MDF with 0.6 mm plastic laminates on both sides and laminate lipping all around.

Support Brackets:

Granite /Reagent Support Brackets serve the purpose of supporting the granite with carrying the service lines. Made of 2 mm CRCA MS sheet with epoxy powder coating.

Shelves & Drawers:

CRCA shelves should have a load carrying capacity of 50 kg.

Slides & Handles:

High precision made double extension ball slides. Grass hinges with CED coating for extended corrosion resistance. PVC Recess Handles provides extra corrosion resistance, easy replacement, and better aesthetics. Flush design helps in no protruding handles and better safety of the users.

All the cabinets should have shutter and drawer fronts in CRCA steel. All storages should be with locks

Main & Add On Units:

Surface Treatment:

The complete M.S. material of cabinet is pretreated (degreased, Zinc phosphate) and

epoxy powder coated for better corrosion resistance. The thickness of powder coat is 45-50 microns, which passes the test of Salt Spray for 1000 hours and having the Scratch Hardness of 3Kgs.

Laboratory Furniture:

The steel frames, panels & shutters should be made from Prime Quality CRCA (Cold Rolled Cold Annealed) Steel.

□ Should have the height adjustable leg ensures that the leg is securely held in place during the mounting and moving of the cabinet. It should have a wide foot of dia. 40 mm. Height adjustments should be easily done either manually or by screw driver. The black plastic should have a load bearing capacity 450 kg/each.

□ The pretreated steel should be painted with Epoxy paint with special encapsulated powder having a film thickness of 40-60 microns. The powder coating layer with this thickness imparts high scratch resistance & the special encapsulated powder should ensure that oil or chemical marks are not formed on the surface. The surface should be easily cleaned using wet Cloth.

□ The load carrying capacity of each shelf of the cabinet should be 40 kg & hence heavy load can be safely placed in the cabinets.

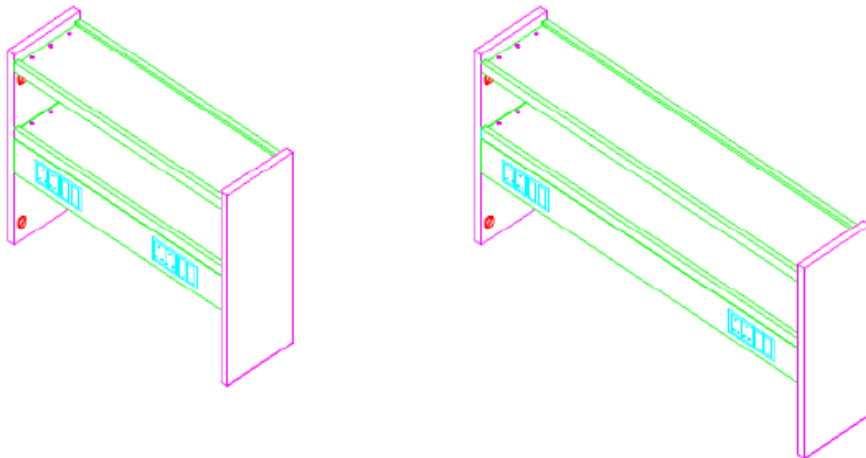
□ Party should use high precision make double extension ball slides in the cabinet drawers.

These are the best fitting slides & the drawers open fully. These should be easy in handling compared to the less reliable, cheaper roller slides. These slides should have surpassed more than 55000 cycles of drawer cycle test (forward & backward movements) with a 15kg load in the drawer & this speaks highly about the quality of these slides.

□ Should use high quality hinges with special coating called CED (Cathode Electro-deposition) which ensures very high corrosion resistance.

□ The skirting in laboratory should be made of Poly Vinyl Chloride light in weight & is not affected by water that comes in contact while cleaning the floor

2.REAGENT SHELVES



Description:

The reagent shelves are mostly provided with Peninsular and Island type workbenches where there is need to store Reagent bottles.

Material:

The end vertical support and horizontal shelves should be made up of 0.9 mm thick CRCA M.S. sheet. PP support should be given on the horizontal panels for better corrosion resistance.

Surface Treatment:

The complete material is pretreated (degreased, Zinc phosphate) and epoxy powder coated for better corrosion resistance. The thickness of powder coat should 45-50 microns, which passes the test of Salt Spray for 1000 hours and having the scratch hardness of 3 Kgs.

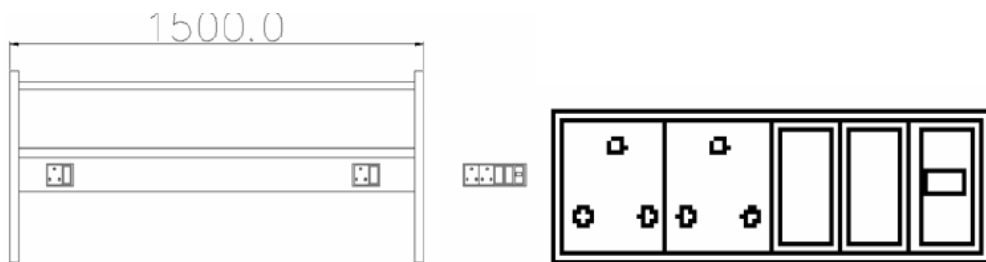
Other Specifications:

Each vertical panel should be assembled with horizontal shelf with M6 fasteners having Zinc-Cobalt coating for better corrosion resistance. The horizontal shelf should have provision for fixing the service panel to it.

Load Carrying Capacity:

The load carrying capacity of each Reagent shelf should be 30 kgs. of UDL for the length of 1000

Service Panels:



The service panels carry all electrical fittings and are attached with Reagent shelf. It comes in the modular range of Reagent shelves.

Height: 120 mm

Material:

The raw material used for service panel is 0.6 mm thick CRCA M.S. sheet.

Surface Treatment:

Complete M.S. material of cabinet is pretreated (degreased, Zinc Phosphated) and epoxy powder coated for better corrosion resistance. The thickness of powder coat is 45-50 microns, which passes the test of salt spray for 1000 hours and having the scratch hardness of 3 kgs.

Other Specifications:

Each service panel is assembled with Reagent shelf by pop-rivets for better aesthetics.

It has a bottom panel cover. All the electrical fittings, wires coming from mains to switches on service panels are completely enclosed to avoid any accidental situations.

Electrical Fittings:

Each electrical module consists of

- 1) 16 Amp socket with switches X 2 nos
- 2) 5 Amp Socket with switches X 2 nos

All the above accessories should have a very high temperature withstanding capacity and excellent electrical insulation properties. The rear portion of above accessories, which is in contact with live metal are made from thermo set material, which does not melt on heating

3. Work Surface:

The various work surfaces provided are as follows:

1) Granite:

18(+/-1mm) mm. thick high quality granite in jet black colors with the edges having round profiles of 10 mm. radius on top side. The overhang of granite is 25 mm. at front side of understructure. It has good chemical resistance, high scratch & wear resistant and good clean ability.

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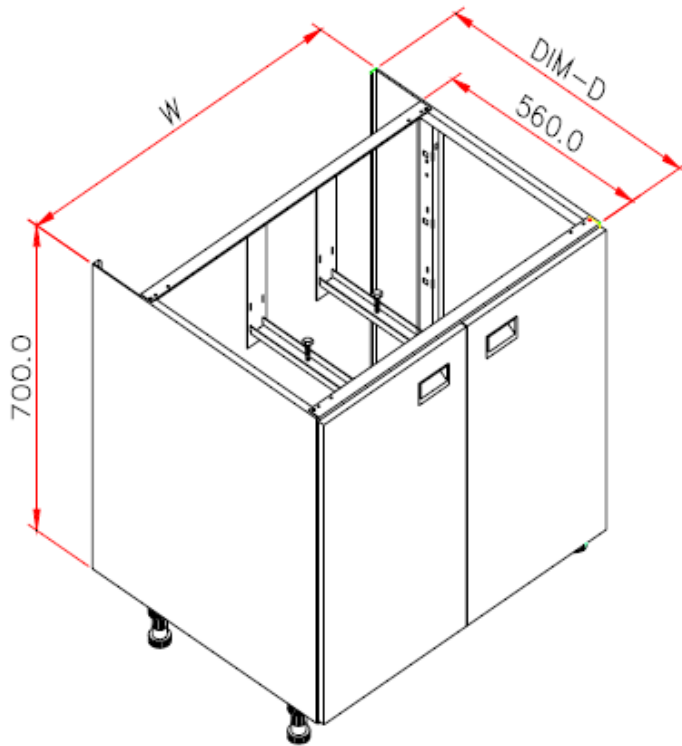
Orion (Import)

1.6-mm. thick orion (import) sheet with suitable backing material.

Backing Material:

The backing material for granite should be NEOPRENE MAT OF 6MM THICK

4. Sink Units



The sink unit consists of a base cabinet, S.S. & a faucet.

Base Cabinet:

The raw material used for cabinet is 0.8 mm thick CRCA M.S. sheet.

Surface Treatment:

The complete M.S. material of cabinet is pretreated (degreased, Zinc Phosphate) and epoxy powder coated (Ivory color) for better corrosion resistance. The thickness of powder coat is 45-50 microns, which passes the test of Salt Spray for 1000 Hours and having scratch hardness of 3 kg.

Sink:

Sinks are in Steel (with or without drain board), Ceramic & Polypropylene with waste couplings

The standard sizes as per specifications given.

Water Faucet:

Sink unit has 3-way (2 Straight + 1 Swan Neck) water tap made up of Brass and with Epoxy powder coatings.

11.SPECIFICATION OF DOCUMENT STORAGE MODULAR CABINET

- 1.1 Storage Filing Cabinet 4 Drawer (1320 x 620 x 470 mm)
- 1.2 The filing cabinets shall be of rigid knockdown construction made with CRCA 0.6 mm thickness. It shall have easy to grip full length handle recess integrated into the 4 metal drawer fronts.
- 1.3 Drawer Size and Files type: For hanging 'Ezee' / 'Visa' Files (Foolscap), from front to back (files along the width), no. of 20mm thick file which can be hanged in above way per drawer is 28.
- 1.4 Centralized locking with 10 lever cam lock and arrangement having anti tipping arrangement to ensure that when one drawer is open for use, it does not allow other drawers to be opened.
- 1.5 Slide: It should have high quality precision ball slide. Tested for 30 kg. UDL for 75000 cycles (BIFMA cyclic test).
- 1.6 Finish: Shall be in Epoxy polyester powder coat to the thickness of 50 microns (+/-10).

12.SPECIFICATION OF PASS BOX

- 1.1 Pass box should be provided for the movement of small items, fixtures and products
- 1.2 Should be made up of stainless steel
- 1.3 Doors should be equipped with interlocks such that both doors cannot be opened at the same time.
- 1.4 All framing around opening should be SS to ensure against cracking
- 1.5 Frames should be flushed with walls.
- 1.6 With double door with UV lamp
- 1.7 Approximate Dimension:24" x 24" x 24"