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**Technical Specification**

**SS Furniture's**

HLL Biotech Limited  
Chennai

Revision: 00

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**Project No.:** 120310

**Project:** Integrated Vaccines Complex,  
Chengalpattu

**Technical Specification for  
SS Furniture's**

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## **1. Proposed Modular Construction Area in the Plant**

The combined effect of a proper HVAC system, clean room panels and clean room furniture's shall provide a clean, hygienic and aesthetic atmosphere inside the facility.

### **1.1 SS Furniture's general specifications**

The SS Furniture will be supported with necessary furniture's like cross over benches, cloth lockers, bins, storage racks, trolleys etc

All the furniture's shall be made from SS 304 with matt finish of 240 grit and electro polished wherever specified.

The furniture's shall be GMP complaint with no sharp edges and with smooth corners.

All welded point to be devoid of any weld beads.

The furniture's shall be provided with non-shedding nylon bushes at their legs or base

Furniture's like cross over benches and racks shall not be flushed with floor and shall have a minimum clearance of 150 mm for cleaning.

SS304 sheet with minimum thickness of 2 mm shall be used with sufficient cross members in between for additional strength (wherever not specified).

**General specification for various furniture's are as mentioned below.**

#### **1.1.1 Cross Over Bench**

- Sizes of the cross over benches are mentioned in the BOQ
- MOC SS 304 (minimum 16 gauge)
- Finish: 240 grit
- Legs shall be provided with non-shedding nylon bush at the bottom with 150mm clearance
- Vendor to consider proper support and stiffeners
- Cross Over bench shall be of "E" type or "C" type or "S" type
- Various storage options for face masks, gloves and head caps and discard option integrated to the same cross over bench shall be provided (TBD)

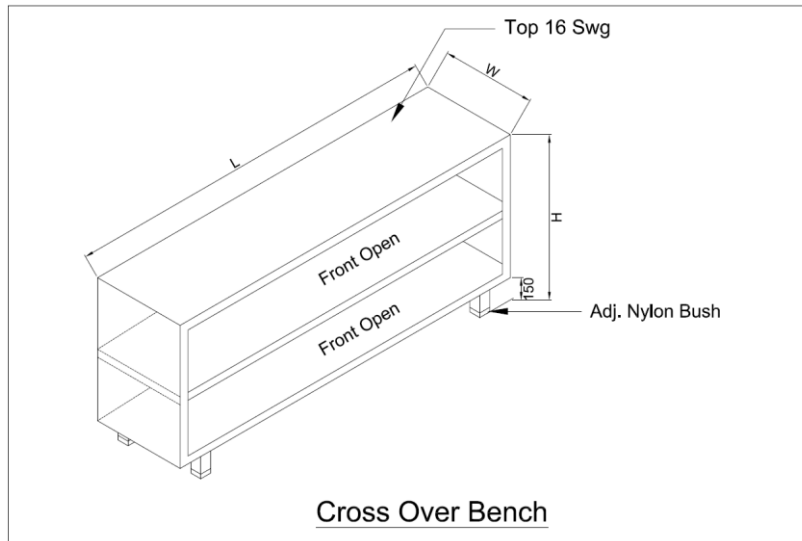
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### 1.1.2 Janitor Closet

- Sizes of the House Keeping Cabinet are mentioned in the BOQ
- MOC SS 304 (minimum 16 gauge)
- Finish: 240 grit
- Minimum 4 nos. of shelves one side (at least with 450 mm height) and other side fully shelve to keep mop stick.
- SS 304 240 grit smoothened door handles with lock and key.
- Magnetic latches shall be provided for keeping the doors closed fully flushed.
- Legs shall be provided with non shedding nylon bush at the bottom with 150 mm clearance from the floor.
- Top portion of the cabinet shall be provided with a slope to avoid any deposition and to assist in easier clean ability.
- Vendor to consider proper support and stiffeners.

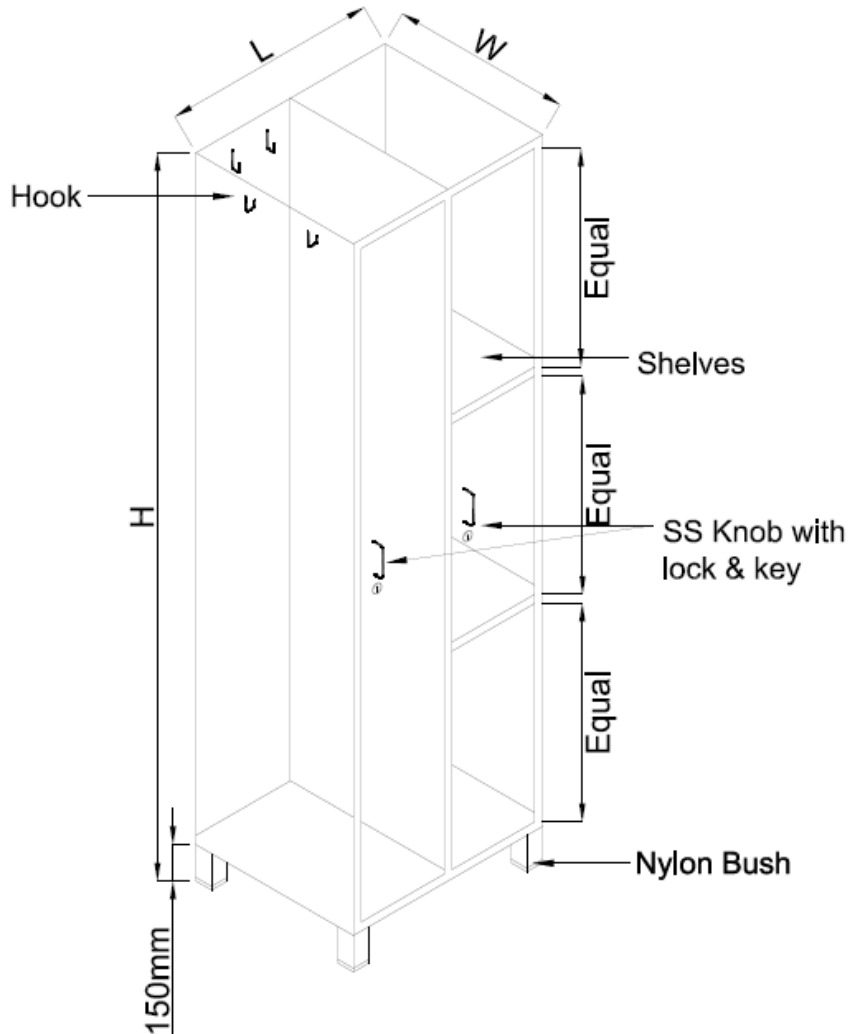
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**1.1.3 SS Stands**

- Sizes of the stands (for Registers, Settle plates) are mentioned in the BOQ
- MOC SS 304 (minimum 18 gauge)
- Finish: 240 grit
- Proper fixing arrangement to be provided
- Settle plate stands shall be adjustable and fixed type as mentioned in the BOQ

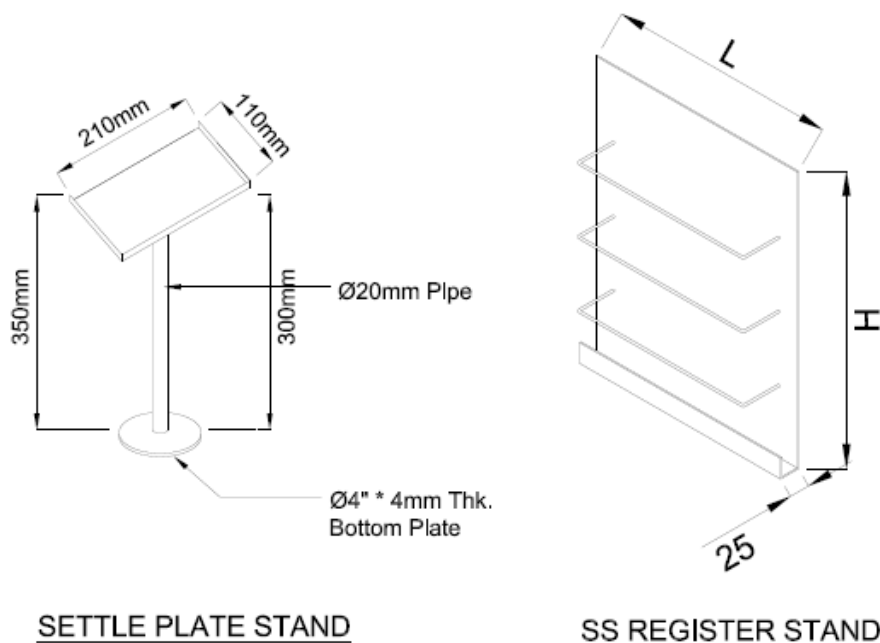
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### Ref. Drawing:



SETTLE PLATE STAND

SS REGISTER STAND

### 1.1.4 Shoe Racks

- Sizes of the shoe racks are mentioned in the BOQ
- MOC SS 304 (minimum 18 gauge)
- Finish: 240 grit
- Legs shall be provided with non-shedding nylon bush at the bottom with 150 mm clearance from the floor
- Linear type shelves for placing footwear and shoe cover
- SS Pipe connection running along the length of the shoe rack above shelves. The SS pipe to extend to above ceiling to be provided for connection with HVAC ducts.
- Vendor to consider proper support and stiffeners.

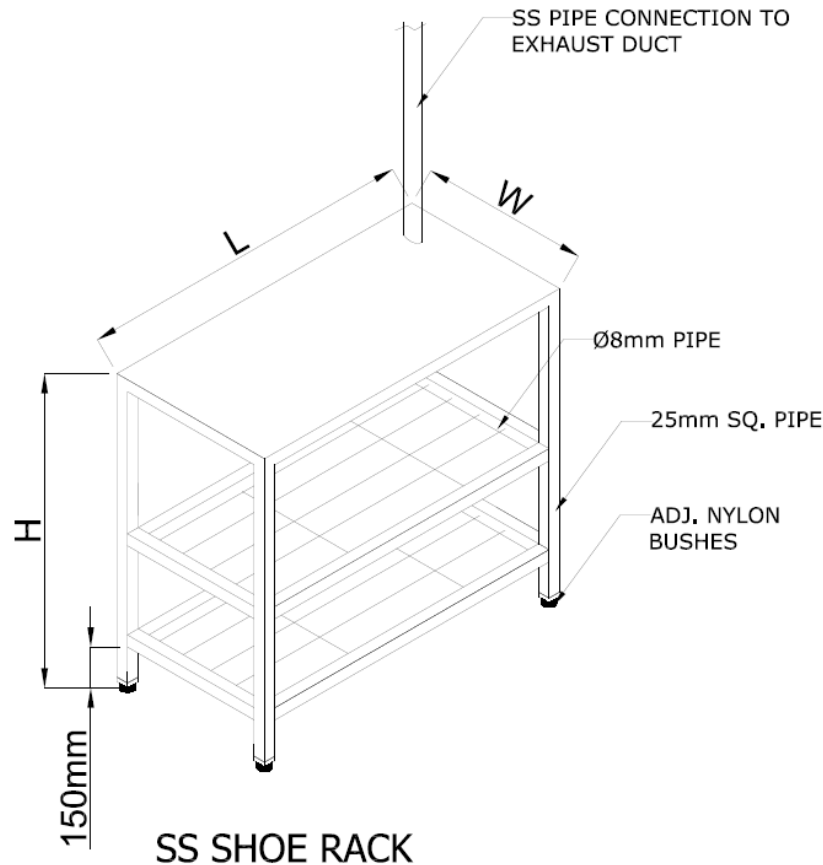
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**1.1.5 Lockers and Cubicles**

- Size and type of the lockers / cubicles are as mentioned in the BOQ
- This involves Apron lockers, Personnel lockers, material lockers and Garment cubicles (Refer the BOQ for dimensions details)
- MOC SS 304 (minimum 18 gauge)
- Finish : 240 grit
- A round knob of SS 304 on the front for opening the door.
- Inset Lock with keys to be provided.
- Legs shall be provided with non-shedding nylon bush at the bottom
- In double door locker (with partition inside) Shelve to be provided to keep shoe and dress.
- Top portion of the Single Door locker shall be provided with a slope to avoid any deposition and to assist in easier clean ability
- Mechanical interlocking to be provided between the doors in Double door locker.

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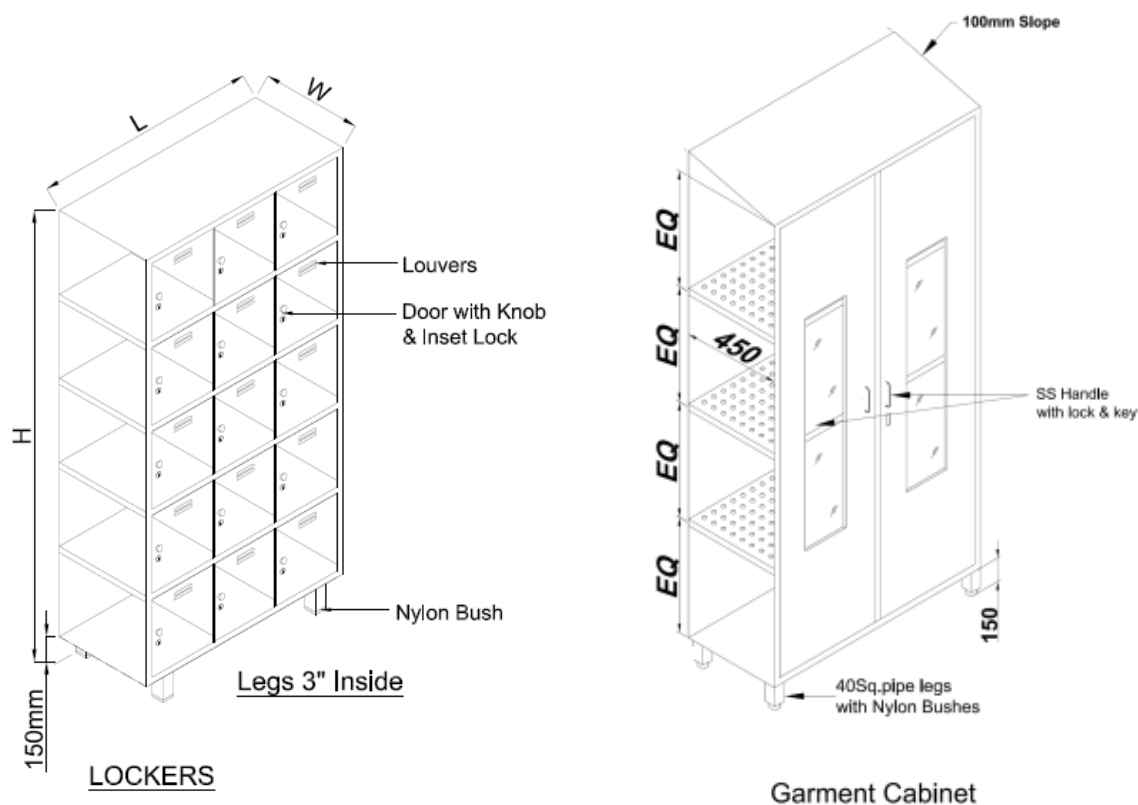
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- Garment cabinet shall be with internally coved joints , double leaf door with double glazed view panel (minimum 5 mm thick toughened glass), door handles
- The shelf shall be made from 16g SS 304 perforated sheet smoothened to 240 grit and provided with necessary stiffeners
- The Garment cabinet shall be provided with minimum 4 shelf for storing garments, hair covers and socks.
- Magnetic latches shall be provided for keeping the doors closed fully flushed.
- Top portion of the GSC shall be provided with a slope to avoid any deposition and to assist in easier clean ability.
- The Garment cabinet will be floor mounted and legs to be provided with non-shedding nylon bush at the bottom.

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### 1.1.6 Chairs

- Sizes of the chairs are mentioned in the BOQ
- MOC SS 304 (minimum 18 gauge)
- Finish: 240 grit
- Clean Room compatibility of Grade B



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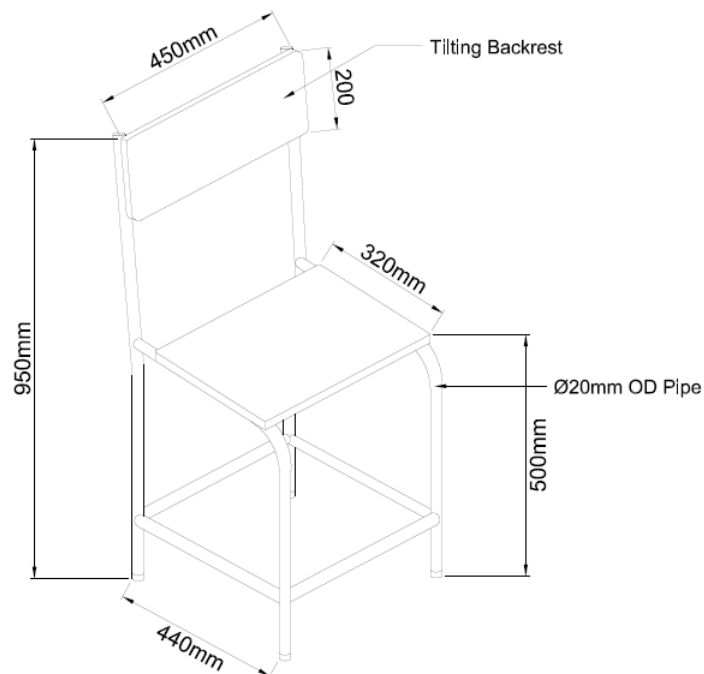
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- Proper fixing arrangement to be provided
- Legs shall be provided with non-shedding nylon bush at the bottom

**Ref. Drawing:**



**1.1.7 Bins**

- Sizes details of the Discard / Feed / Garment bins are as mentioned in the BOQ
- MOC SS 304 (minimum 16 gauge)
- Finish: 240 grit
- The top lid shall be tilting type.
- Handles to be provided to lift the bin.
- The base support to be of non-shedding nylon

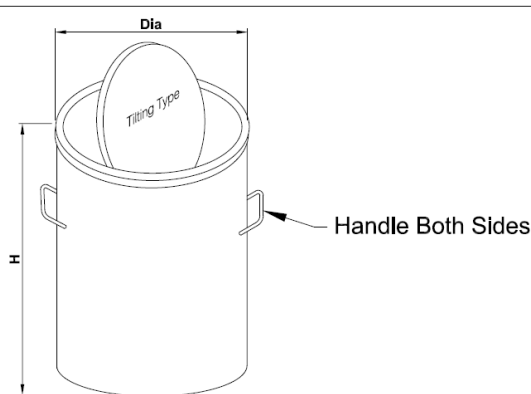
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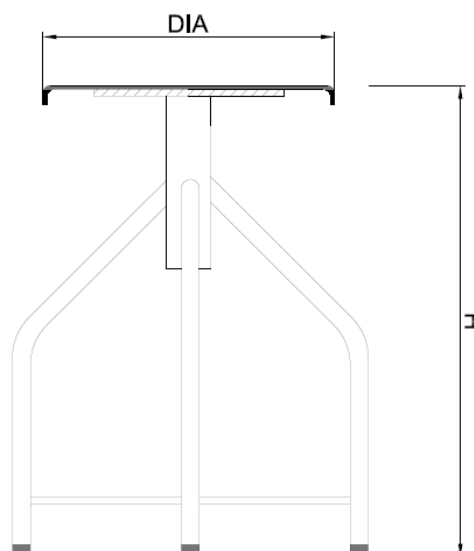


### Garment / Disposable Bin

#### 1.1.8 Stool

- Sizes details of the stools are mentioned in the BOQ
- MOC SS 304 (minimum 16 gauge)
- Finish: 240 grit
- Handles to be provided to lift the bin.
- Legs shall be provided with non-shedding nylon bush at the bottom

#### Ref. Drawing:



#### 1.1.9 Glove Box & Trays

- Sizes of the Glove boxes and Trays are mentioned in the BOQ
- MOC SS 304 (minimum 18 gauge)

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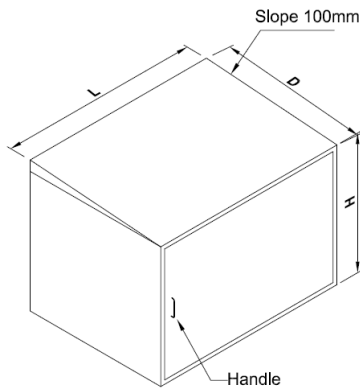
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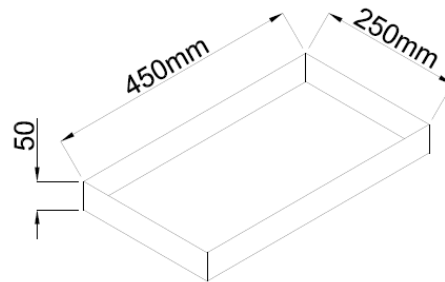
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- Finish: 240 grit
- Glove Box shall be provided with Handle.
- Magnetic latches shall be provided for keeping the door closed fully flushed.
- Top portion of the Glove Box shall be provided with a slope to avoid any deposition and to assist in easier clean ability.
- Proper wall mounting arrangement to be provided

### Ref. Drawing:



Glove Box



SS Tray

### 1.1.10 Racks

- Sizes and type of the racks are mentioned in the BOQ
- MOC SS 304 (minimum 16 gauge)
- Finish: 240 grit
- Minimum 4 no.s of shelves with equal size.
- SS304 sheet with minimum thickness of 2 mm shall be used with sufficient cross members in between for strength.
- Legs shall be made from Sq. Pipe and non-shedding nylon bush at the bottom
- Racks shall be provided with coverings from all the side and door option from the front (TBD)

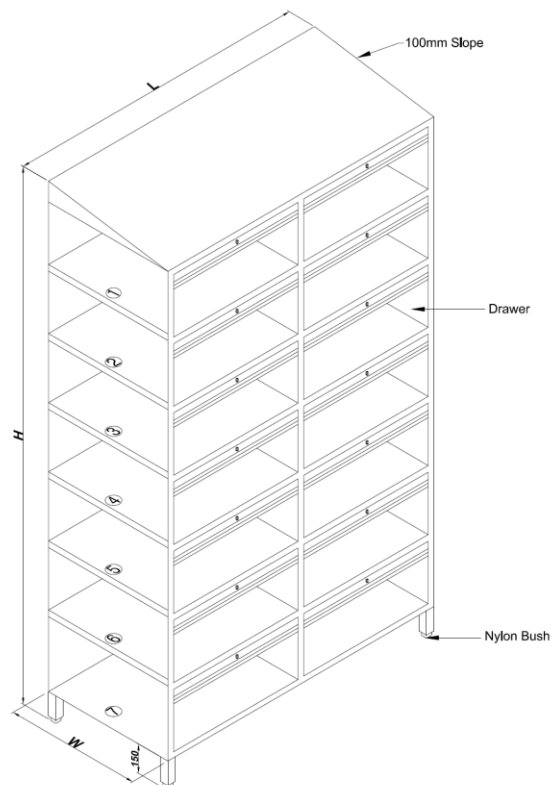
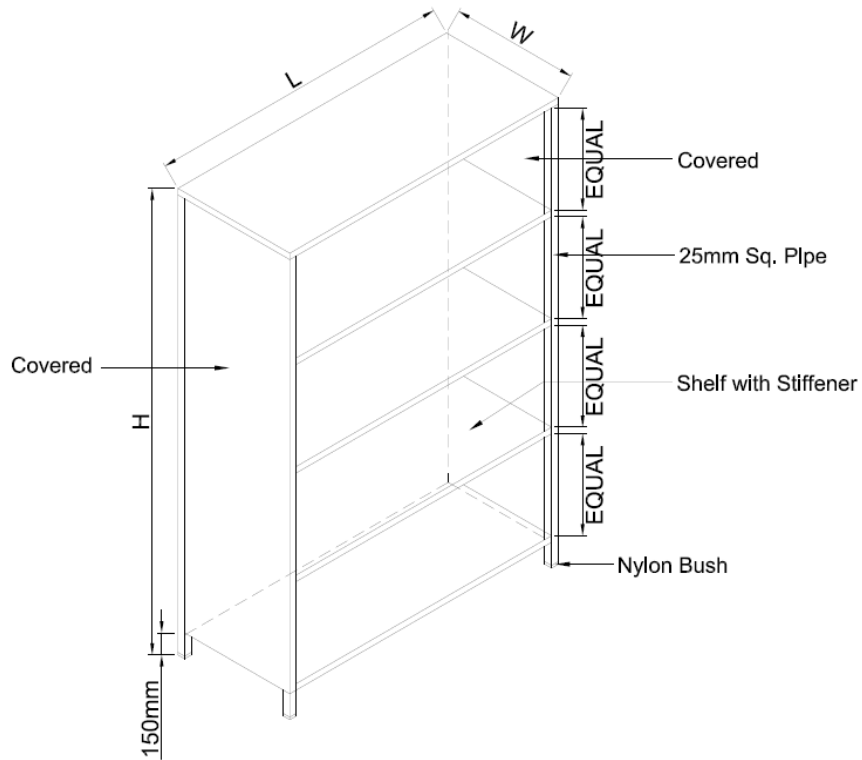
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### 1.1.11 Pallets

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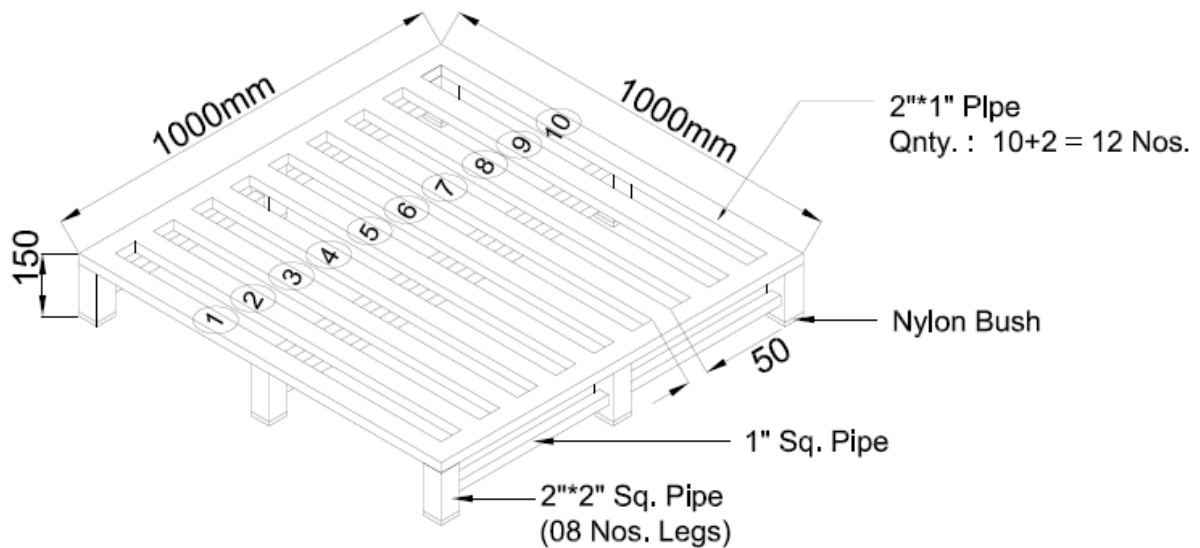
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- Sizes of the pallets are mentioned in the BOQ
- MOC SS 304 (minimum 18 gauge)
- Finish: 240 grit
- Proper fixing arrangement to be provided
- Legs shall be provided with non-shedding nylon bush at the bottom

### Ref. Drawing:



### 1.1.12 Tables

- Sizes of the tables with drawers and tables without drawers are mentioned in the BOQ
- MOC SS 304 (minimum 16 gauge)
- Finish: 240 grit
- "C" Type support to the legs provided for sturdiness with a minimum 4 number of stiffener at top and bottom.
- Maximum equipment loading of 190 kg/m<sup>2</sup> on the table. Vendor to consider proper support and stiffeners
- Legs shall be provided with non-shedding nylon bush at the bottom.
- Work Table with Bottom Shelf: Bottom shelf to be provided with proper support and stiffeners.
- Work Table with Drawer and cabinet: Two nos of drawer with Handle, lock and key. One cabinet to be provided as per the typical drawing provided below.
- Work Table with Sink: Size of sink internal dimension 400 x 300 x 250 mm to be provided, SS sheet to be provided two side of the table to avoid water spillage on the wall panel (refer the typical details) and Drain Nozzle to be provided.

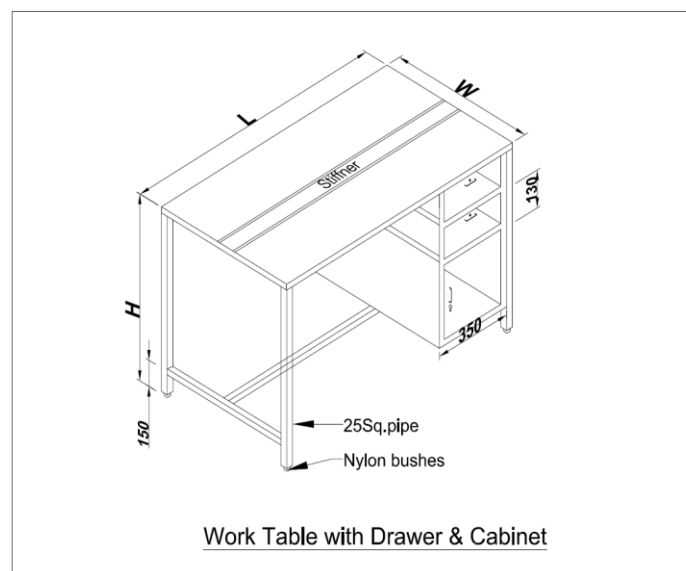
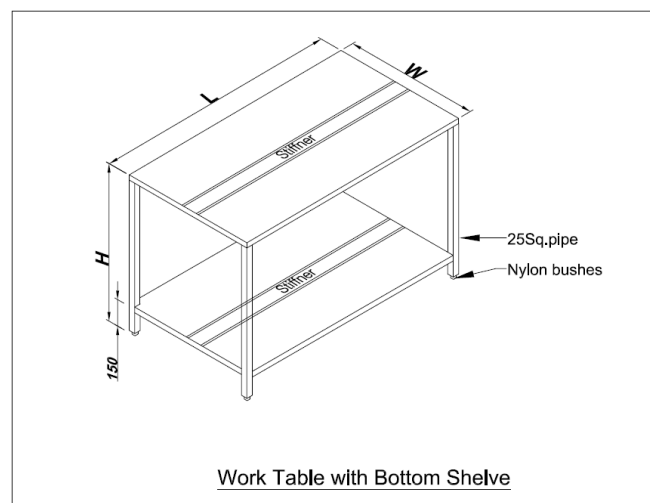
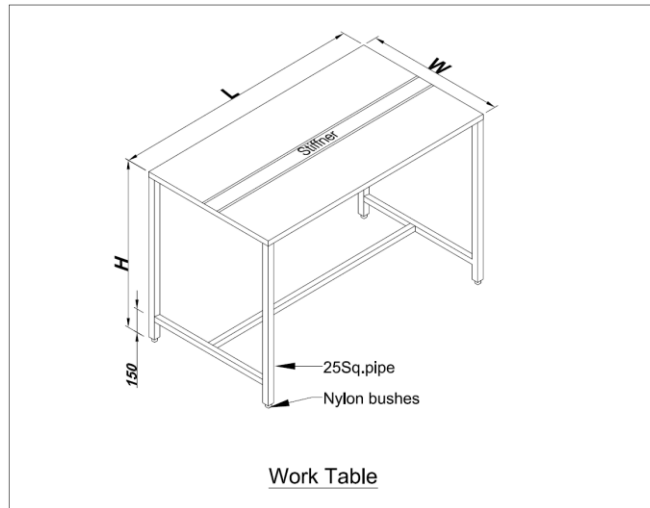
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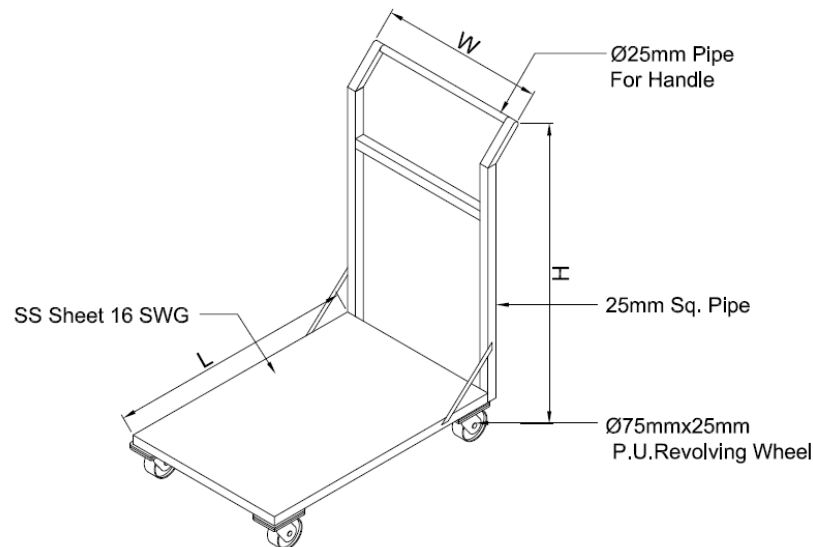
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### 1.1.13 Trolleys

- Size details of the Normal Trolley & dress collection cabinets are mentioned in the BOQ
- MOC SS 304 (minimum 16 gauge)
- Finish: 240 grit
- Platform made of 16 gauge with stiffener on bottom for strength & load bearing capacity.
- Handles made of round pipes of 16 SWG. for firm grip & load pushing capacity.
- SS platform with heavy duty PU wheels of size 75x25mm PU wheels for easy movement provided with brakes

**Ref. Drawing:**



**Platform Trolley**

### 1.1.14 Wash sinks and Wash sinks with work table

- Sizes of wash sinks and wash sinks with work tables are mentioned in the BOQ
- MOC SS 304 (minimum 16 gauge)
- Finish: 240 grit
- Support to the legs provided for sturdiness with a minimum 4 number of stiffener at top and bottom
- SS sheet to be provided 3 sides of the table to avoid water spillage on the wall panel (refer the typical details mentioned below)
- Drain Nozzle to be provided

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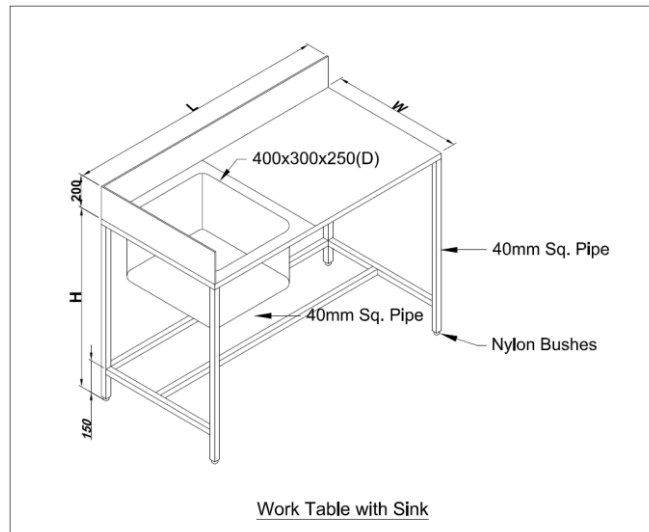
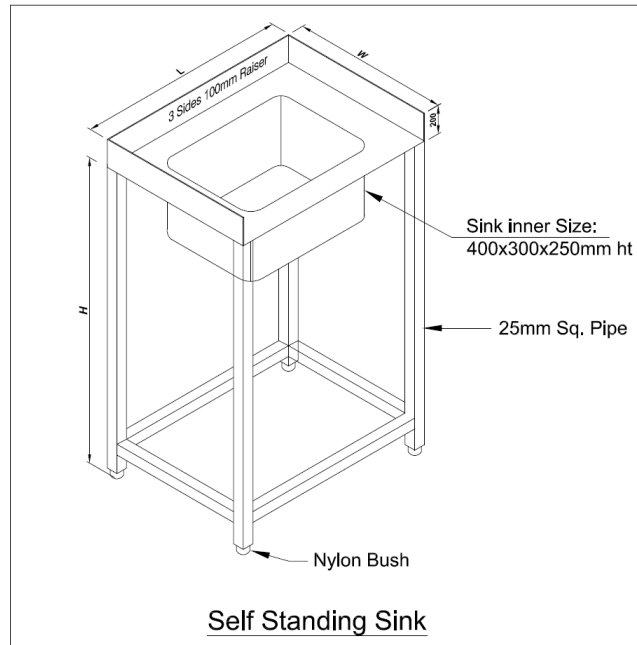
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- Legs shall be provided with non shedding nylon bush at the bottom
- Vendor to consider proper support and stiffeners

### Ref. Drawing:



### 1.1.15 Miscellaneous equipment

- This set of equipment includes SS ladder, SS perforated bins for garments, SS perforated bins for aluminum seals, SS perforated bins for filling syringes, SS 3 bucket trolley, SS surgical bins with perforations, SS carrier boxes.



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- General specifications provided in this document and dimensions / description provided in the BOQ will be applicable for fabrication of this equipment

## 2. Abbreviations

Abbreviation	Description
SS	Stainless Steel
GA	General Arrangement
MOC	Material Of Construction
BOQ	Bill Of Quantity
GMP	Good Manufacturing Practise

## 3. Change Log

Date	Initial	Revision	Section	Change/Comments
2015-06-19	MJY	001	-	New Document

## 4. Annexures

Annexure-1: BOQ of SS Items – NPI\_120310\_EQP(SS)\_S1\_BOQ 01

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