

Minutes of the Pre-Bid Conference held on 15.02.2017 at Conference Hall, Administrative Block, Room No.F1-02 (First Floor), CUTN in connection with pre-bid queries raised by prospective bidders against our Tender Enquiry No.32/2016-17 for supply and installation of Laboratory Furniture for Department of Life Sciences & Materials Science

The following members of the Committee were present:

1. Prof.P. Ravindran, Head, Department of Materials Science - Chairperson
2. Dr. E.M. Shankar, Associate Professor & Head, Department of Life Sciences - Member
3. Dr. V. Gunasekaran, Assistant Professor, Department of Materials Science
(Nominated by Chairperson in place of Dr. Beer Mohammed)
4. Dr. Indranil Chattopadhyay, Assistant Professor, Dept. of Life Sciences -Member & Convener

Dr. Jayalakshmi Krishnan, Assistant Professor, Dept. of Life Sciences could not attend the meeting due to pre-occupation.

The representatives of following prospective bidders attended the Pre Bid Conference:-

1. Shri D. Anandan, Marketing, M/s. Modern Lab Interior, Chennai
2. Shri.V. Boopathy, Sales Manager, M/s. Technico Laboratory Products Private Ltd., Chennai

An email communication received from Ms. Priyanka Yadav, Sr. Engineer — Sales & Marketing, M/s. Citizen Industries & Shri.A. Naresh Kumar, Director, M/s. Technico Laboratory Products Private Limited, Chennai with regard to pre-bid query has been addressed by the Committee.

Opening Remarks:

- i. Dr. E.M. Shankar, Associate Professor & Head, Department of Life Sciences at the beginning welcomed the participating members and after introduction, he briefed all participants about the tender.
- ii. It was explained that purpose of Pre-Bid Conference is to explain the various important provisions of the bidding documents to the prospective bidders and to clarify the queries that the bidders may have in the subject, bidding documents.

The techno – commercial/ technical queries and clarification sought by the prospective bidders are given as under:-

| S. No | Query/ Clarification Sought | Reply |
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| 1 | As per Tender Clause No.1 I (Who can bid?), the manufacturer should have a standard price list of its products all over the country and must submit a copy of the said list with the Technical Bid. All the lab furniture are tailor made as per specification & requirement of | After detailed discussion, it was decided to obtain catalogue, since the specifications are varying |

DEPARTMENT OF LIFE SCIENCES
 CENTRAL UNIVERSITY OF TAMIL NADU
 DATE: 22/02/2017
 REF.No: 593

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S. Shankar
22/02/17

V. Gunasekaran
22/02/2017

P. Ravindran
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I. Chattopadhyay
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| | user, so any specific price list not available. Hence kindly remove this clause. | |
| 2 | As per Tender Clause No.19, Necessary valid Test Certificate from a laboratory which enjoys NABL certification shall be produced for all the quoted products at the time of bidding itself. Kindly allow for third party SEFA ASHRAE Test Certificate for lab furniture and Fume Hood. SEFA & ASHRAE Test Certificate for lab furniture and fume hood are generally recommended. | National Accreditation Board for Testing and Calibration Laboratories (NABL) is a Constituent Board of Quality Council of India. Hence the earlier clause may be retained. |
| 3 | Deadline for the supply and installation of the furniture as per Summary Sheet is 30 days from the date of issuance of Purchase Order. Looking to the BOQ the delivery time is too less to execute the work. Hence recommended to keep it at least 8-10 weeks. | After detailed discussion, it was decided to go for 8- 10 weeks with regard to delivery period. |
| 4 | Item No.1- Instrument Work Station Table The cabinet size should be at least 800Lx600Wx880H The cabinet should consist of removable partition made of 16 mm 20G pre coated galvanized sheet. | The cabinet should consist of removable partition made of 20G recoated galvanized sheet. |
| 5 | The shutters & drawer fronts will have (Rahau or equivalent) PVC thermo foil face E1/E2 grade core material. The Urethane acrylic coating on top of thermo foil should be resistant to deformation & scratches. PVC thermo foil will be of thickness (400 – 450) microns. | The cabinet body, shutters & drawer fronts will have 20G pre coated galvanized sheet furnished in epoxy power coating paint. |
| 6 | It should be made of 9mm 20G pre coated galvanized sheet. | 9mm to deleted made of 20G pre coated galvanized |
| 7 | Backing Material: The granite should be backed by 6mm thick 20G pre coated galvanized sheet | Backing Material: Not necessary that the granite be backed by 6mm thick 20G pre coated galvanized sheet. |
| 8 | Item No. 2. Instrument Work Station Table Reagent racks which should be made of 16mm thick 20G galvanized sheet | The shutters & drawer fronts will have 20 G pre coated galvanized sheet furnished in epoxy powder coating paint. |
| 9 | Item No. 5. Fume Hood Material of construction (External) 18mm thick 20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating. Melamine resin lamination with minimum thickness of 0.8mm pressed at high temperature and pressure (using hydraulic hot press) with full round post form finish. Edges are sealed with 2mm thick (Rehau or equivalent) PVC edge banding and trimming should be present for aesthetic appeal. | No change is required. |

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| 10 | Fume hood blower cluster detail Kindly furnish us with the blower cluster details for fume hood | Individual blower's clusters to be provided for each fume hood. |
| 11 | Ducting for fume hood Kindly provide the ducting quantity | Basis and the actual amount for ducting will be as per actual measurement carried out at the time of installation. Additional charges apply for sq.mtr and quoted separately. |
| 12 | Work top for fume hood (flooring) The work top should be made of intense chemical resistant 25 microns thick FEP (Fluorinated Ethylene Propylene) supported on a backing material of 16 mm thickness with a pressure sensitive acrylic adhesive that adheres to most surfaces. Skirting of 15mm thick granite on 3 sides should be provided. | No change is required. |
| 13 | Chemical Storage Base Cabinet Melamine resin lamination with minimum thickness of 0.8mm pressed at high temperature and pressure (using hydraulic hot press). Edged should be sealed with 2mm thick Rehau PVC edge banding and trimmed for aesthetic appeal. | No change is required. |
| 14 | Chemical Storage Base Cabinet Shutters The shutter fronts should have PVC thermo foil face E1/E2 grade core material. The Urethane acrylic coating on top of thermo foil should be resistant to deformation & scratches PVC | The shutters & drawer fronts will have 20 G pre coated galvanized sheet furnished in epoxy powder coating paint |
| 15 | Amenities 1 No of FRP Sink (12"x10") with single way water tap will be provided. | Amenities 1 No of Polypropylene Sink (12"x10") with single way water tap to be provided. |
| 16 | Item No.7.Vertical Storage Cupboard Configuration of cabinet | Specification/configuration incorporated in the amended document. |
| 17 | Item No.13. ground Mounted Cupboard Cabinet body: 16 mm thick marine grade plywood (KITPLY or EQUIVALENT) with 1 mm thick melamine lamination on both sides, chemically treated to prevent termite/ insect attack. The lamination should be done. With hot press with minimum of 90 tones pressure. All exposed edges should be lipped with PVC lipping not less than 2mm to protect from impacts, moisture and insects. The lipping should be of machine applied with hot melt glue at a temperature of 205 degree Celsius or above | 60-80 micron MOC in GI with epoxy powder coated finishing. |
| 18 | Item No.14 Island table work Station Island table work Station The configuration of island table | Specification/Configuration amended as requested. |

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The bidders were informed to ensure that all mandatory documents / certificates / undertakings are enclosed with the bids, as specified in the tender document.

The bidders were informed that the minutes of the, pre-bid conference and amendment of the bidding forms shall be published on the website of Central University of Tamil Nadu. The bidders were also informed that they should also regularly visit the CUTN website for any amendments issued.

In case of any further information/clarification, they were asked to contact over phone, to the Purchase Section at 04366-277359 (or) send email on purchase@cutn.ac.in; Individual visits are not entertained.

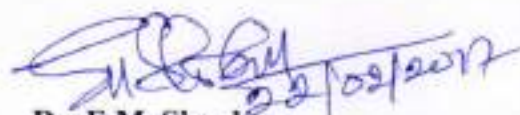
The meeting ended with a vote of thanks to the representatives of the prospective bidders.



Prof. P. Ravindran

Head

Department of Material Science



Dr. E. M. Shankar

Associate Prof. & Head

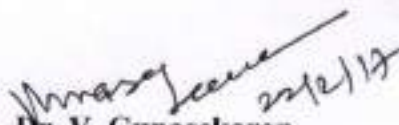
Department of Life Sciences



Dr. Indranil Chattopadhyay

Assistant Professor

Department of Life Sciences



Dr. V. Gunasekaran

Assistant Professor

Department of Material Science

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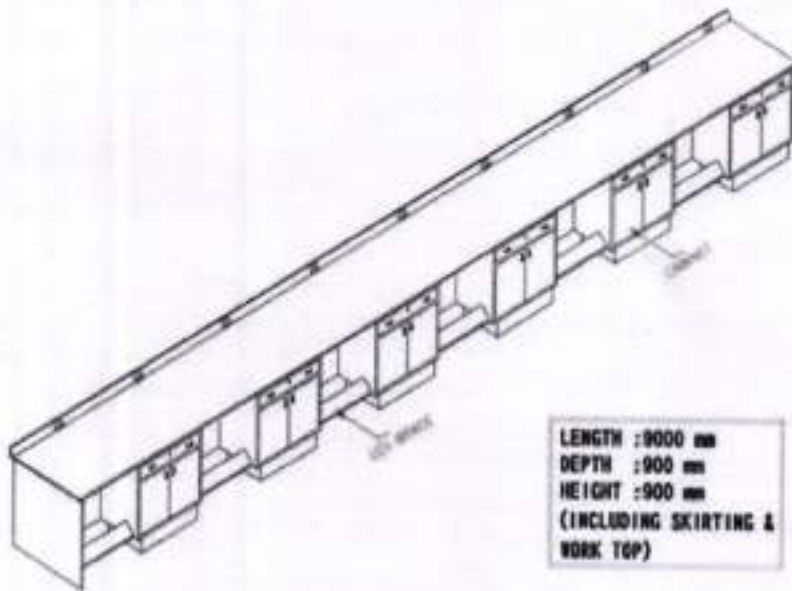
REVISED TECHNICAL SPECIFICATIONS

Laboratory Furniture for Department of Life Sciences

Detailed Research Laboratory Furniture Specifications are mentioned below:

Item No.1 – Instrument Work Station Table – 2 Nos.

Nos. (Size: 9000L x 900W x 900H mm)



LENGTH : 9000 mm
DEPTH : 900 mm
HEIGHT : 900 mm
(INCLUDING SKIRTING &
WORK TOP)

CABINET BODY

: 20 G Pre coated galvanized sheet, completely Finished with Epoxy powder coating.

: The total number of cabinets required are 6.

: The cabinet size should be at least 800Lx600Wx880H provided with top drawer and bottom cupboard with locking arrangements. The cabinet should consist of 1 removable partition made of 20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating.

SHUTTERS & DRAWER

: The shutters & drawer fronts will have 20 G pre coated galvanized sheet furnished in epoxy powder coating paint.

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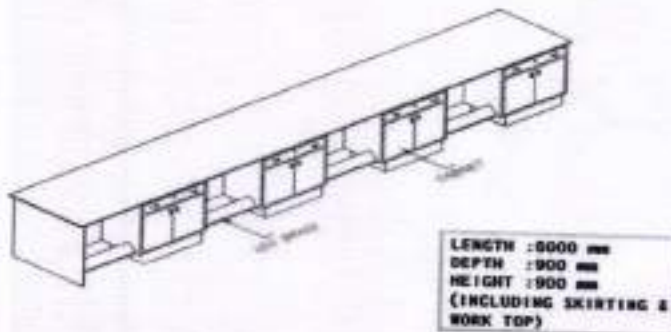
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- KNEE SPACE PANEL** : Should be made of 9mm 20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating.
- HARDWARE** : **Drawer slides** – Hafele / Hettich or Equivalent
Hinges – CED coated (cathode electrode deposition) – Hafele/hettich or Equivalent.
Handles - Hafele / Hettich or Equivalent
- ELECTRICAL ARRANGEMENT** : 9 numbers of 15/5 amps 3 pin sockets cum switch with **Electrical Panel** should be provided.
- WORK TOP** : 18mm (±1mm) thick **Jet Black granite** worktop
 Should be provided. The granite edges moulded and groove at bottom should be present to avoid spillage of solvents and liquids on the cabinet.
- BACKING MATERIAL** : The granite should be backed by 6mm thick 20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating to avoid direct load on under bench cabinets.

Item No.2 Instrument Work Station Table - 2 Nos.

(Size: 6000L x 900W x 900H mm)



- CABINET BODY** : 20 G Pre coated galvanized sheet, completely Finished with Epoxy powder coating paint.
- : The required number of total cabinets are 4.

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The cabinet size should be at least (800Lx600Wx880H) which should be provided with top drawer and bottom cupboard with locking arrangement. It should consist of 1no removable partition made of 20 G Pre coated galvanized sheet, completely Finished with Epoxy powder coating.

SHUTTERS & DRAWER

The shutters & drawer fronts will have 20 G pre coated galvanized sheet furnished in epoxy powder coating paint.

KNEE SPACE PANEL:

Should be made of 20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating.

HARDWARE

- Drawer slides** – Hafele / Hettich or Equivalent
- Hinges** – CED coated (cathode electrode deposition) – Hafele/hettich or Equivalent.
- Handles** - Hafele / Hettich or Equivalent

WORK TOP

18mm (±1mm) thick **Jet Black granite** worktop should be provided. The granite edges should be moulded and grooved at bottom to avoid spillage of solvents and liquids on the cabinet.

BACKING MATERIAL

The granite should be backed by 6mm thick 20 G Pre coated galvanized sheet, completely Finished with Epoxy powder coating paint to avoid direct load on under bench cabinets.

Item No.3 – Student Work Station Table – 2 Nos.

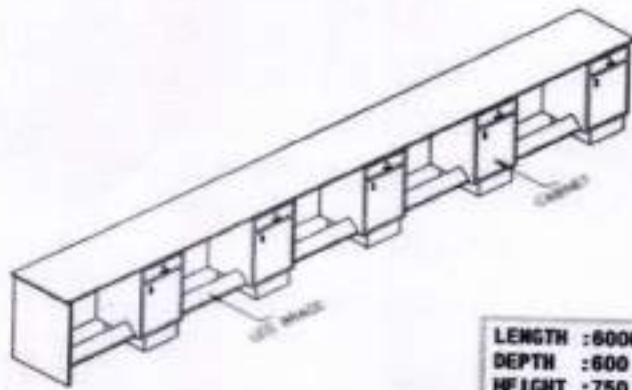
Nos. (Size: 6000L x 600W x 750H mm)

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LENGTH : 6000 mm
 DEPTH : 600 mm
 HEIGHT : 750 mm
 (INCLUDING SKIRTING & WORK TOP)

CABINET BODY

- : 20 G Pre coated galvanized sheet, completely Finished with Epoxy powder coating paint.
- : The total number of required cabinets are 5.
- : The cabinet size is should be at least 450Lx 500W x 880H which should be provided with top drawer and bottom cupboard with locking arrangement. It should consist of 1no removable partition made out of 16mm 20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating.

SHUTTERS & DRAWER

- : The shutters & drawer fronts will have 20 G pre coated galvanized sheet furnished in epoxy powder coating paint.

KNEE SPACE PANE

- : Should be made of 9mm 20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating.

HARDWARE

- : **Drawer slides** – Hafele / Hettich or Equivalent
- : **Hinges** – CED coated (cathode electrode deposition) – Hafele/hettich or Equivalent.
- : **Handles** - Hafele / Hettich or Equivalent

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WORK TOP

: 18mm (±1mm) thick **Jet Black granite** worktop

Should be provided. The granite edges moulded and groove at bottom should be present to avoid spillage of solvents and liquids on the cabinet.

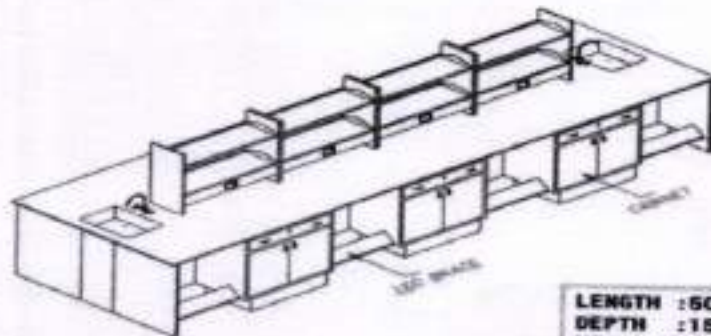
BACKING MATERIAL

: The granite should be backed by 6mm thick

20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating to avoid direct load on under bench cabinets.

Item No. 4 - Island Table Work Station - 4 Nos.

(Size: 5000L x 1500W x 900H mm)



LENGTH : 5000 mm
DEPTH : 1500 mm
HEIGHT : 900 mm
(INCLUDING SKIRTING & WORK TOP)

CABINET BODY

: 20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating.

: The total number of cabinets required are 6.

: The size of the cabinet should be at least 800L x 600Wx 880H which should be provided with top drawer and bottom cupboard with locking arrangement. It

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should consist of 1no removable partition made of 20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating.

SHUTTERS & DRAWER :

The shutters & drawer fronts will have 20 G pre coated galvanized sheet furnished in epoxy powder coating paint.

KNEE SPACE PANEL :

Should be made of 9mm 20 G Pre coated galvanized sheet, completely Finished with Epoxy powder coating.

HARDWARE :
Drawer slides - Hafele / Hettich or Equivalent

Hinges - CED coated (cathode electrode deposition) - Hafele/hettich or Equivalent.

Handles - Hafele / Hettich or Equivalent

RACKS

All Island Benches should have two tire Reagent racks which should be made out of 16mm thick 20 G galvanized sheet, completely finished with Epoxy powder coating

with full round post form finish. **The loading levels of the Reagent Rack are to be lined with fiber glass reinforced polyester resin of 1mm thickness for enhanced chemical resistance.**

AMENITIES

: Plug points for electrical connections (8 nos 16/6 Amp power sockets) should be provided.

: **2 No's of Polypropylene (24"x18")**
With 3 way water tap should be provided.

WORK TOP

: 18mm (±1mm) thick **Jet Black granite** worktop

Should be provided. The granite edges moulded and groove at bottom should be present to avoid spillage of solvents and liquids on the cabinet.

BACKING MATERIAL

: The granite should be backed by 6mm thick

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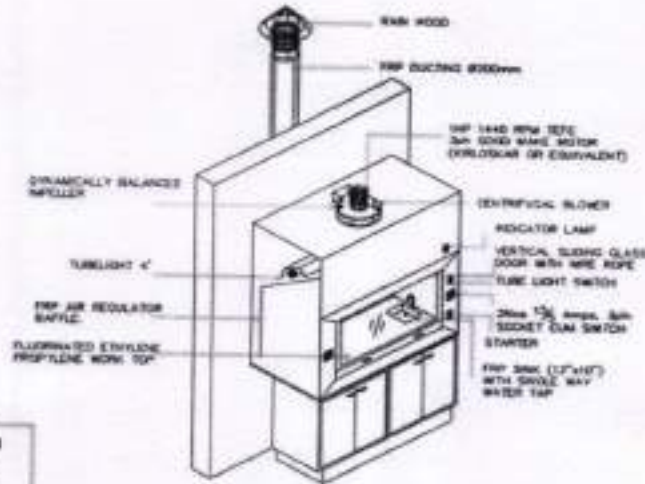
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20 G Pre coated galvanized sheet, completely Finished with Epoxy powder coating to avoid direct load on under bench cabinets.

Item No.5- Fume Hood – 2 Nos.



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| LENGTH : 1500 mm |
| DEPTH : 750 mm |
| HEIGHT : 2400 mm |

TYPE : AUTO Bypass, Constant Volume Type

TESTING STANDARD:

ASHRAE 110:1995 (American Society of Heating, Refrigerating and Air-Conditioning Engineers)

| | |
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| Over All Dimension | 1500L x 750W x 2400H in mm |
| Hood Dimension | 1500L x 750W x 1500H in mm |
| Base Cabinet Dimension | 1500L x 750W x 900H in mm |
| Bed Size | 1350 x 600 in mm |

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| Material of Construction: (External) | 18mm thick 20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating. Melamine resin lamination with minimum thickness of 0.8mm pressed at high temperature and pressure (using hydraulic hot press) with full round post form finish. Edges are sealed with 2mm thick (Rehau or equivalent) PVC edge banding and trimming should be present for aesthetic appeal. |
| Internal Construction | Fume hood internal shall be of Phenolic Resin 6mm thickness. The phenolic panel shall a minimum flexure strength of 1500 psi, with a flame spread less than 25 as per ASTM. |
| Door | Single, vertical sliding, concealed type door, balanced with counter weights, sash weights and wire rope etc. |
| Powered by | 1HP 1440RPM TEFC 3ph Good make Motor (Kirloskar or equivalent). |
| Ducting | Rigid ducting of FRP of 200mm diameter 4mm thick rigid FRP pipe should be provided with suitable rain-hood. Additional charges apply for per sq. meter and quoted separately. |
| Baffle | The baffles shall be fabricated using 6mm thick liner of Phenolic resin. At least three slots shall be provided for effective distribution of flow of air. They should be placed at a distance of approximately 5cm from the back liner and shall be removable for cleaning. |
| Impeller | Dynamically balanced FRP Impeller |
| Centrifugal Blower | Silent high efficiency remote blower consisting of continuous rating motor and chemical resistant impeller. The blower should be designed to give a face velocity at safe working height as per the international safe velocity norms (ANSI). The exported face velocity at open sash should be 100FPM. The blower body FRP UV treated high density and chemical (corrosion) resistant should be mounted on a metallic stand. Individual blower clusters for each fume hood. |

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| Sash | The sash should be of glass with vertical rising frame. The bottom of the sash frame should have a full length handle. The sash should be counter balanced with a weights to prevent titling and binding during operation. The glass panel should be 5mm toughened glass. |
| Suction Expected | 800-1000 cfm |
| Color | IVORY/BLUE |
| Flooring | The work top should be made of intense chemical resistant 25 microns thick FEP (Fluorinated Ethylene Propylene) supported on a backing material of 16 mm thickness with a pressure sensitive acrylic adhesive that adheres to most surfaces. Skirting of 15mm thick granite on 3 sides should be provided. |

Chemical Storage Base Cabinet:

CARCASS

- : The base cabinets should consist of 20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating.
- : Melamine resin lamination with minimum thickness of 0.8mm pressed at high temperature and pressure (using hydraulic hot press).
Edged should be sealed with 2mm thick Rehau PVC edge banding and trimmed for aesthetic appeal.

SHUTTERS

- : The shutters & drawer fronts will have 20 G pre coated galvanized sheet furnished in epoxy powder coating paint.

CHEMICAL RESISTANT COATING

- : The cabinet should consist of chemical resistant PP-FRP Lining on removable partition and inner walls.

AMENITIES (Included):

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| Lighting | 1 No. 4 feet Tube light of 20 volts will be provided. |
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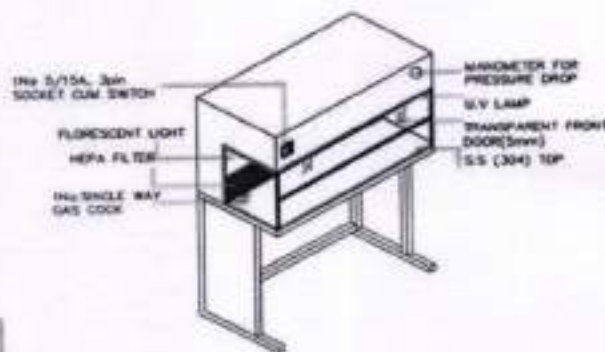
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| Electrical Arrangements | The hood super structure shall be fully wired. It also has 2No's . Electrical sockets and switches of (230V, 5/15A, 50HZ) |
| Cable Entering port | For easy access of cable of from fume hood to electrical sockets. |
| Sink & Water tap | 1 No of Polypropylene Sink (12"x10") with single way water tap will be provided. |

Item No. 6- Laminar Air Flow – 2 Nos.



LENGTH :1200 mm
DEPTH :600 mm
HEIGHT :1800 mm

- DIRECTION OF FLOW** : **VERTICAL: 1200Lx 600W x 1800H mm**
- CLEANLINESS** : Class 100 ISO 5 for particle sizes 0.5um<353 of air at Both at rest & operation condition as per ISO 14644-1 (ISO 5 replaces class 100 US FED STD 209 E)
- PARTICLE RETENTION** : 0.3 Micron & Above
- Noise Level** : 65 Decibel on "A" Scale ±5
- Velocity** : 90 Feet / Minute ±20
- Worktable** : IS 304 Grade Stainless Steel Table
- Front door** : 5mm clear acrylic-Folded Type.

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U V lamp : 30 Watt 3 Feet, Make-PHILIPS-1 NO.
Illumination : 36 Watt 3 Feet, Fluorescent tube with diffusers-2 No's.
Pressure : Inclined Acrylic Manometer 0-25mm range.
Other Accessories : 5/15 Amp power point, Gas inlet & Castor Wheels.
Power supply : 230V, Single Phase, 50HZ

HEPA FILTER:

SIZE : 48"X24"X6"-1 No
Media : Ultra clean glass fiber paper imported
Separators : Fine clean glass fiber paper imported
Retention : 0.3 Micron
Efficiency : 99.97%
Pressure Drop : 16mm WG

PRE FILTER:

SIZE : 800X400X65 MM
Media : Ultra clean glass fiber paper imported
Retention : 10-15 Micron
Efficiency : 90%
Pressure Drop : 6mm WG

MATERIAL CONSTRUCTION : 18 gauge electro galvanized sheet with epoxy polyester powder coating.

Blower Assembly : DIDW type blower system, which should consist of dynamically balanced aluminum centrifugal impeller driven by an 1/3 HP, Single Phase, 1440 RPM motor, enclosed in an PU coated GI casing suitable suspended in a pair spring & connected to the filter chamber through flexible canvas duct.

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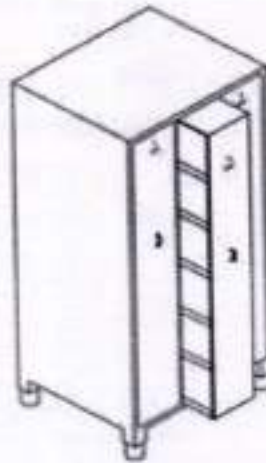
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Item No.7- Vertical Storage Cupboard –2 Nos.

(Size: 900L x 750W x 1800H mm)



LENGTH : 900 mm
DEPTH : 750 mm
HEIGHT : 1800 mm

- CABINET BODY : 20 G Pre coated galvanized sheet,
Completely Finished with Epoxy powder coating.
- HORIZONTAL PARTITION : 6 No's
- VERTICAL PARTITION : 3 No's

The vertical drawer should have wheels for smooth running purpose. An index card should be provided for identification of materials.

Item No.8- Ground Mounted Cupboard – 2 Nos.

(Size: 900L x 450W x 1800H mm)

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LENGTH : 900 mm
DEPTH : 450 mm
HEIGHT : 1800 mm

CABINET BODY : 16mm thick 20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating.

It should have a front glass door and 4 nos. of horizontal partitions with locking system.

Item No.9- Anti Vibration Table – 2 Nos.

(Size: 900L x 600W x 750H mm)



LENGTH : 900 mm
DEPTH : 600 mm
HEIGHT : 750 mm

CABINET BODY : 16mm thick 20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating

The inner table should be an assembly of rubber pads duly fixed on each contact surface of the stone to dampen the minute vibration. The outer work table should be positioned independently on the inner table with drawer. Part of the top surface

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should be fixed with Granite Slab where the balance can be mounted. Rubber pads should be used to absorb the pulsating vibration coming from the floor.

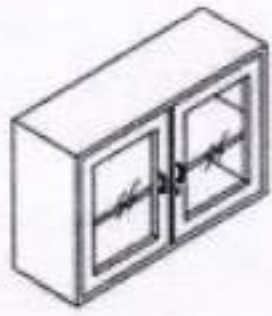
Item No.10 Emergency Shower with Eye Wash- 2 Nos.



COMBINATION: Should provide a complete safety for immediate first aid. In one location both Eye/face wash function & drench shower should ensure instant flushing of the eyes/body with enough water. Shower and eye wash should be operated simultaneously or independently either by push lever or foot operation. Recommended water pressure 30 psi 110 liters per minute.

Item No.11- Wall Storage Cupboard – 10 Nos.

(Size: 900L x 300W x 600H mm)



CABINET BODY
LENGTH : 900 mm
DEPTH : 300 mm
HEIGHT : 600 mm

: 16mm thick 20 G Pre coated galvanized sheet, Completely finished with Epoxy powder coating..

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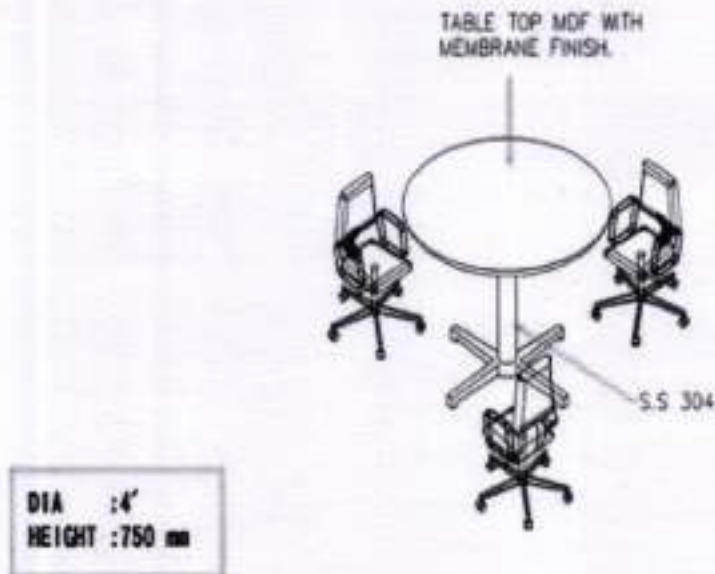
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It should have a front glass shutter. One no. of horizontal adjustable partition should be provided with locking arrangement. The unit should be fixed on the wall through the eye-let holes.

Item No.12- Round Table with 3 Chairs- 2 Nos.

(Equivalent to – WIPRO/FEATHERLITE/GODREJ brand)
(Size: 4ft (dia) x 750H mm)



Specifications: Table top should be made up of MDF with membrane finish. Understructure should be made of stainless steel with grade S305.

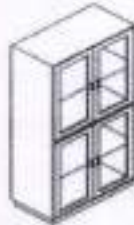
Item No.13- Ground Mounted Cupboard- 2 Nos.

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(Size: 900L x 450W x 1800H mm)



LENGTH : 900 mm
DEPTH : 450 mm
HEIGHT : 1800 mm

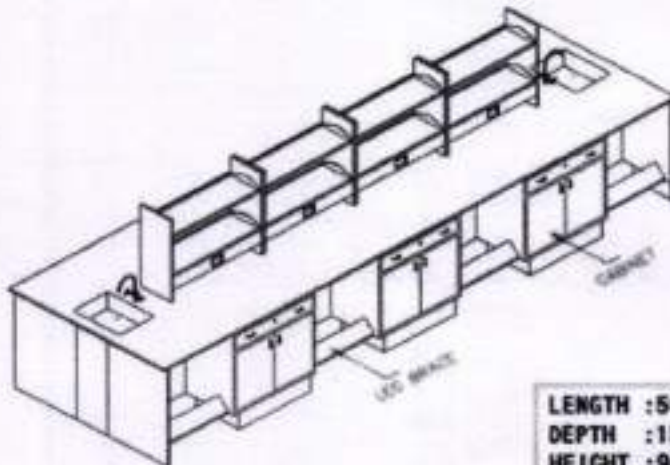
CABINET BODY

: 60 – 80 micron MOC in GI with epoxy powder coated finishing.

It will have front glass door and 4 nos. of horizontal partitions will be provided with locking system.

Item No.14- Island Table Work Station- 3 Nos.

(Size: 3000 L X 1500W X 900Hmm)



LENGTH : 5000 mm
DEPTH : 1500 mm
HEIGHT : 900 mm
(INCLUDING SKIRTING & WORK TOP)

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CABINET BODY

: 20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating.

: The total number of cabinets required are 6.

: The size of the cabinet should be at least 800L x 600Wx 880H which should be provided with top drawer and bottom cupboard with locking arrangement. It should consist of 1no removable partition made of 20 G Pre coated galvanized sheet, completely finished with Epoxy powder coating.

SHUTTERS & DRAWER

: The shutters & drawer fronts will have 20 G pre coated galvanized sheet furnished in epoxy powder coating paint.

KNEE SPACE PANEL

: Should be made of 9mm 20 G Pre coated galvanized sheet, completely Finished with Epoxy powder coating.

HARDWARE

: **Drawer slides** – Hafele / Hettich or Equivalent

Hinges – CED coated (cathode electrode deposition) – Hafele/hettich or Equivalent.

Handles - Hafele / Hettich or Equivalent

RACKS

All Island Benches should have two tire Reagent racks which should be made out of 16mm thick 20 G galvanized sheet, completely finished with Epoxy powder coating

with full round post form finish. **The loading levels of the Reagent Rack are to be lined with fiber glass reinforced polyester resin of 1mm thickness for enhanced chemical resistance.**

: Plug points for electrical connections (8 nos 16/6 Amp power sockets) should be provided.

AMENITIES

: **2 No's of Polypropylene (24"x18")** With 3 way water tap should be provided.

WORK TOP

: 18mm (±1mm) thick **Jet Black granite** worktop

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Should be provided. The granite edges moulded and groove at bottom should be present to avoid spillage of solvents and liquids on the cabinet.

BACKING MATERIAL : The granite should be backed by 6mm thick 20 G Pre coated galvanized sheet, completely Finished with Epoxy powder coating to avoid direct load on under bench cabinets.

Item No.15 - Instrument Work Station Table – 10 Nos.

(Size: 6000 mm LX 900mm DX900mmH)

- Power module at the back side for the full length of the table.
- Individual power module having 2 nos. of 5/15 amps power point with switches.
- Power point fitted below the work top in lieu of the drawers.
- 5 power points to be provided
- Drawers continuous



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Item No.16: Lab Stool with back -12 Nos.

- Black rolling stool
- Comfortable and generously cushioned stool
- Pneumatic lift with back
- Easy-to-clean vinyl, making for easy maintenance
- Features seat height and depth adjustment and 360° swivel
- Works well in healthcare environments where space is minimal



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