

**TECHNICAL SPECIFICATIONS FOR INTERIOR DECORATION WORKS WITH ASSOCIATED CIVIL AND OTHER MISCELLANEOUS WORKS**

**Note :** Product with ISI stamp shall have to be provided where available in case of non-availability of such stamping for a particular product, Architects / Employer's decision as per list of material or otherwise shall be final & binding.

**1.0. WOOD WORK**

**1.1. Teak Wood**

Teak wood shall be of the best quality available in India. It should be well seasoned and free from sap, knots, warps, cracks and other defects. All wood work shall be planed neatly and truly finished to the exact dimension. All joints shall be neat and strong, truly and accurately fitted and glued before being fitted together.

**1.2. Veneers and Plywood**

The veneers and the ply wood shall conform to the IS : 851 and IS:303 respectively. It shall be resin bonded suitable for intended use. The Contractor shall submit approved samples at the Architect / Owner site office.

**1.3. Phenol Bonded Ply Wood**

Commercial ply wood, decorative ply wood conforming to IS:303/1975 bonded with phenol formaldehyde synthetic resin of B.W.P. type as specified in IS:848/1974 of approved make should be used.

**1.4. Phenol Bonded Block Board**

Commercial block board conforming of IS:1659/1979 bonded with phenol formaldehyde synthetic resin of IS:840/1974 of approved make should be used.

**1.5. Phenol Bonded Teak Particle Board**

Commercial particle board conforming to IS:3097-1980 exterior grade bonded with BWP type phenol formaldehyde synthetic resin. All edges of the particle board to be painted with one coat of chlorinated paint of approved shade, make and quality. The particle board should be of approved make.

**1.6. Phenol Bonded Prelaminated Particle Board**

Prelaminated particle board should be 3 layered melamine faced conforming to IS:12823 of latest edition. This should also conform to DIN:68765 NEMA LD-3 and BIS Licence IS-3087 for plain particle board. All edges of the board to be painted with one coat of chlorinated paint of approved shade, make and quality. The prelaminate particle board should be approved make with ISI mark.



## 1.7. Decorative Laminates

Laminate sheets shall be 1 mm or 1.5 mm (as per design requirements) or as specified in the respective items) thick with +0.127 mm tolerance and obtained from any of the following approved manufacturers e.g. Formica, Decolam, Merino and Greenlam & samples should have approval of the Architects / Employer.

## 1.8. Wooden Flush Shutters

(Solid Core Type) : Solid core flush shutters shall be commercial or teak veneered type as specified in the item of approved manufacturer registered with ISI and shutter shall bear ISI mark. An approved sample shall be deposited in the office of the Owner / Architects at site for reference. The shutter will be provided with lipping. Finished thickness of the shutter shall be as mentioned in the item. Shutter should be hot pressed and phenol formaldehyde should be used as glue.

## 1.9. Hardware Fittings

All hardware fittings for doors shall be either oxidised iron, brass, anodised aluminium as specified in the schedule of quantities. These hardware fittings shall be obtained from approved manufacturers and shall bear ISI mark wherever available. The samples for the fittings shall be submitted to the Owner / Architects for their approval. Hardware fittings for door shutters shall be paid in door shutter item or separately as given in schedule of quantities. No separate payment shall be made for hardware fittings if not mentioned otherwise in the schedule of quantities. The rate for hardware fittings shall include for supplying, fitting and fixing the fittings with necessary cadmium plated screws, washers, bolts, nuts, etc. as required. All locks shall be provided with keys in duplicate and rate shall include for the same.

Approved samples of hardware fittings shall be deposited with Owner / Architects for reference.

## 1.10. Workmanship

- a) The workmanship shall be first class and to the approval of the Owner / Architect. Scantlings and board shall be accurately sawn and shall be of required width and thickness. All carpenter's work shall be wrought except where otherwise described. The workmanship and joinery shall be accurately set out in strict conformity according to the drawings and shall be framed together and securely fixed in approved manner and with properly made joints. All work is to be properly tenoned shouldered, wedged, pinned, braced etc. and properly glued with approved quality glue to the satisfaction of the Owner / Architect.



- b) Screws : Unless otherwise specified all screws to be used in woodwork and joinery shall be of cadmium plated and of approved quality. The size (diameter and length) should conform to those specified in hardware schedule.
- c) Tolerance : 1.5mm (1/16") will be allowed for each wrought face of sizes specified except where described as finished in which case they shall hold to the full dimensions.
- iv) Protection : All edges of timber frames etc. shall be protected from being damaged during construction by providing rough timber casing securely fixed and other adequate protective measures.
- v) If it is decided by the Owner to provide antitermite treatment, the building contractor shall co-ordinate his work suitably as directed by the Owner / Architects.
- vi) Door / Window frames shall have cut rebate. Planted rebates shall not be permitted.
- vii) Where door frames are fixed flush with plaster to wall, teak wood cover mould 40 x 12 mm as per drawings shall be provided all round and shall be painted or polish finished to match with finished shutters. This will be paid as a separate item as described in Schedule of Quantities.

1.11. Rates to Include :

Apart from other factors mentioned elsewhere in this contract the rate for item of wood work and joinery shall include for the following -

A. Items of scantling :

- i) All labour, materials and equipments for fixing frame work as per drawing excluding the cost of holdfasts, Rawl Plugs or other fasteners etc.

B. Items of shutters :

- i) All labour, materials, hardware fittings and equipments for carrying out the work as per drawing.
- ii) Labour for fixing the shutters in position (excluding cost of fittings) as per drawing.

1.12. Mode of Measurement

All measurements shall be as per relevant section of I.S. 1200 of latest edition.

- i) Scantling shall be measured in cum. The sectional area shall be the area of the least square, or rectangles from which the scantling may be cut. The length shall be actual length of timber required for the purposes including the extra portion required for jointing.



- ii) Shuttering shall be measured in square metre for closed door shutters area i.e. rebate to rebate without extra measurement for rebates and/or splayed meeting styles of door.

## 2.0. PLASTIC EMULSION PAINT

### 2.1. Material

The emulsion paint and primers in general shall be of approved quality colour and shade of approved manufacturers.

### 2.2. Scaffolding

This shall be double or single as required and directed. If ladders are used, pieces of gunny bags or cloth bags shall be tied on their tops to avoid damage or scratches to the plastered surfaces etc. proper stage scaffolding shall be erected when painting the ceiling.

### 2.3. Preparation of the surface

The surface to be painted shall be cleaned and all cracks, holes and surface defects shall be repaired with plaster of paris for spot filling, and with filler prepared with whiting, water and a little quantity paint for filling and levelling the wider areas.

### 2.4. Priming Coat

The priming coat of the cement primer of approved quality, make shall be applied over the completely dry surface in the manner as recommended by the paint manufacturers.

### 2.5. Application of Emulsion Paint

The recommendation of approved paint manufacturer whose product is used, shall be followed regarding the preparation of the surface and the application of the priming and finishing coats.

The contractor shall arrange for technical assistance and supervision from the paint manufacturer, during the execution of the painting work. After the priming coat has been applied and perfectly dried, all holes, scratches, if any, shall be repaired as mentioned in 'preparation of surface' and then the second coat of approved shade and manufacturer shall be evenly applied and allowed to dry.

The third coat shall be carefully applied to achieve smooth and even surface after the previous coat has dried up. Minimum 3 coats of paint shall be applied inclusive of primer coat. If a proper and even surface is not obtained to the satisfaction of the Owner / Architects in 3 coats, Contractor shall carry out additional coats of painting to approval at contractor's expenses. Care shall be taken that dust or other foreign materials do not settle or disfigure the various coats.



2.6. Rates to include

Apart from other factors mentioned elsewhere in this contract, the rates for the item of plastic emulsion paint shall include for the following :-

- i) All labour, materials and equipment necessary to carry out the work.
- ii) Supplying the approved emulsion paint for priming and finishing coats.
- iii) Preparing the surface for receiving the primer and finishing coats.
- iv) Scaffolding including its erections and dismantling.
- v) Application of one primer coat and minimum two coats of finishing. If a proper and even surface is not obtained to the satisfaction of Owner / Architects in 3 coats mentioned above, the contractor shall carry out additional coats of painting to approval at contractor's expense.
- vi) Protection to painted surface till dried and handed over.
- vii) Expense, if any, for supervision and technical assistance supplied by the approved paint manufacturers.

2.7. Mode of Measurement

The measurement shall be in square metre. The mode of measurement shall be as per relevant section of I.S.:1200 of latest edition.

3.0. PAINTING & FRENCH POLISHING

3.1. Painting

- a) Material : Ready mixed oil paints and primer, in general, shall be of approved quality, colour and of approved manufacturer. These materials shall be in sealed tin and shall be opened in the presence of the Owner / Architects.
- b) Preparation of Surface
  - i) Iron and Steel works : Surface to be painted shall be thoroughly cleaned, sand papered and/or rubbed with emery cloth, if necessary to remove grease, mortar or any other foreign materials. In case of rusted surface, it shall be first cleaned with wire brushes till the corroded rust is removed. The prepared surface shall be shiny and free from brush marks, patches, blisters and other irregularities. The surface thus finished shall be got approved for painting.
  - ii) Wood work : All surface to be painted shall be thoroughly cleaned, sand papered and removed of all foreign materials. In case of surfaces having knot and nail holes, this shall be filled with knotting and stopping materials. The knotting materials shall consist of pure shellac dissolved in methylated spirit. Stopping materials shall consist of putty. The surface thus treated shall be allowed to dry and then sand papered smooth.



- c) Application : After preparing the surface, a primer coat shall be applied. The primer coat shall be ready mix of approved make and manufacturer. After the primer coat is applied and perfectly dried, all holes, cracks etc. which shall remain, shall be filled in with putty and the surface sand papered smooth. Then a second coat of paint of approved shade and manufacturers shall be evenly applied and allowed to dry.

The third coat shall be carefully applied to achieve smooth and even surface after the previous coat has dried up. Minimum 3 coats of paint shall be applied inclusive of a primer coat. If a proper and even surface is not obtained to the satisfaction of the Owner / Architects in 3 coats, contractor shall carry out additional coats of painting to approval, at contractor's expenses. Care shall be taken that dust or other foreign materials do not settle or otherwise disfigure the various coats.

- d) Rates to include : Apart from other factors mentioned elsewhere in this contract, the rate for the item of painting shall include for the following –

- i) All labour, materials equipment necessary to carry out the work.
- ii) Supplying the approved paint for priming and finishing coats.
- iii) Preparing the surface including knotting and stopping for receiving the priming and finishing coats.
- iv) Scaffolding including its erection and dismantling.
- v) Application of atleast one primer coat and two coats of finishing for wood work and at least two finishing coats for steel work unless otherwise specified. If a proper and even surface is not obtained to the satisfaction of Owner / Architects, contractor shall carry out additional coat of painting to approval at contractor's expense.
- vi) Protection to painted surface till dried and handed over.

Mode of Measurement : Painting to wood work and steel shall be measured separately as per I.S. 1200 (Part XV) of latest edition.

### 3.2. French Polishing

French polish to be used shall comply with I.S. 348 of latest edition in the requirements of quality.

Before french polish is applied, the surface of wood work shall be prepared in the same manner as for painting. The wood to be polished should be first painted with a filler composed of 1 part of whiting mixed with 0.53 part of methylated spirit. After drying, it should be finely sand papered.

On the wood work thus treated, a thin coat of french polish shall be applied and allowed to dry. After drying, the surface shall be lightly rubbed with a fine sand paper prior to the second and third coat. The surface shall show an even polished surface and be approved by the Owner / Architects.



- i) Rates to Include : Similar to that of painting.
- ii) Mode of measurement : Similar to that of painting.

#### 4.0. MELAMINE COATING

The materials shall be of approved brand for wood finish. The application has to be made using sprayer and as per manufacturer's specification.

The surface to be used shall be sand papered using Emery Paper No. 180 or any suitable grade along the grains. After brushing the surface free of loose dust, wood filler shall be applied. Excess filler shall be removed immediately. Allow a gap of 1 hr. if second coat is required. On drying of the filler, after 8 hrs. the surface is to be sand papered again with Emery paper no. 180/220 and the surface is brushed free of loose dust. Sealer coat as per manufacturers specification is then applied in two coats & then sand papered with emery paper no. 240 & finally with emery paper no. 400 & clean thoroughly. Final finish coat is then applied on the finished surface after mixing the base and hardner in a container and allowing the mix to stand for 30 minutes filtered and then applied.

Rates to Include

- i) Similar to that of painting including cost for applying by spray machine.

#### 5.0. N.C. LACQUER

N.C. lacquer should be of approved brand & quality, approval of Architects is obligatory.

Before application of N.C. lacquer, the surface is to be polished using white lac only. The surface should be highly polished as per desired shade. Fillers used during polish should be N.C. putty only. N.C. lacquer shall be applied under spraying machines using 1:1 (N.C. lacquer to N.C. thinner) on dust free surface and shall be allowed to dry for minimum 12 hours in fair weather condition. The drying time may have to be increased in moist atmospheric condition. After drying, the lacquered surface should be rubbed with muslin cloth. No other treatment on the lacquered surface should be made once it is completed.

- i) Rates to Include : Similar to that of painting.
- ii) Mode of Measurement : Similar to that of painting.



## 6.0. GLASS

Glass used shall be clean and/or tinted float or toughened as mentioned in the Schedule of Quantities and of the best quality approved by Architect / Employer without any scratches, bubbles, specks, waviness, undulations or any other defects, unless otherwise specified, all glass shall be as shown on the drawings. The glass used shall be toughened glass with bevelled edges etchings etc. as per requirement and indicated in the drawings and BOQ and is to be got approved by Architect / Employer. Glass shall be well protected from any damage during transportation, storage and progress of work. Any glass which in the opinion of Architect / Employer is not suitable for work shall be rejected and the contractor shall replace the glass with an approved one.

## 7.0. LOOSE FURNITURE

The contractor shall make one sample of each furniture item as per drawing and specification provided by the Architect for the final approval of the Architects / Employer. The bulk production can be taken in hand as soon as the sample is approved and finalised. No extra charges shall be payable for any alternation / modification done in the sample furniture item and also for rejected samples. All upholstery work is to be done in the best workmanship manner to the entire satisfaction of the Employer / Architects. The decision taken by the Architects for the approval of the sample shall be final and binding on the contractor. Brass or aluminium cushion vents to be installed at the back seat or underside of seat cushion as per direction of the Employer / Architects and contractors' quoted rates should include the same.

## 8.0. CHAIRS

All cantilevered chairs have slightly reinforced tubular structure to resist static and impact loads inflicted on the same in day to day use. The tubular frame work is to be made strong and resilient to ensure that the same does not loss its shape after prolonged use as it often happens in case of cheaper chairs of other make. The above is to be achieved by using 25mm steel tubing of 1.6mm thickness. Additional tubes of slightly lower diameter and the same thickness are used as inserts for providing reinforcement at all 4 bends of the chair. Wooden seats, backs, armrests, plastic canes and cushions, 100% inspection of wood components should be arranged to ensure that the quality of the wood used is as per the specifications.

## 9.0. CARPET

Supply and laying carpet of different quality as per BOQ and drawing i.e. woolen, synthetic /acrylic, type designed or plain carpet fixing to floor as per location and type as directed in the drawing and specification of Bill of Quantities with manufacturer's specification complete with necessary work. Prior to fixing, sample and manufacturer shall be approved by Architect / Employer. The fixing should be made as per manufacturer's specification. Rate should be





inclusive of labour, materials inclusive of backing cushion materials if specified end stitching and all other associated works as per direction, complete in all respect. Payment should be made on as per actual floor area. No payment shall be made against any sorts of wastage.

9.1. FALSE CEILING

9.2. G.R.G. Ceiling.

10.1.1. Composition

The GRG range of ceiling tiles are manufactured from glass reinforced gypsum and comprise non-combustible gypsum casting plaster reinforced with a glass fibre membrane resulting in a light weight, strong and prestressed panel.

10.1.2. Surface Finish

The plaster should have silky smooth or textured moulded finish.

10.1.3. Dimensions

All designer tiles are to be designed for installation on a standard 600 x 600mm moulded 24mm table exposed metal grid and are precision made to within plus or minus 0.25 mm.

10.1.4. Fire Performance

Non combustibility : GRG tiles are rated non-combustible as defined in BS 476 : Part 4:1970.

Surface Spread of Flame : GRG tiles are rated Class I for surface spread of flame to BS 476 : Part - 7:1987.

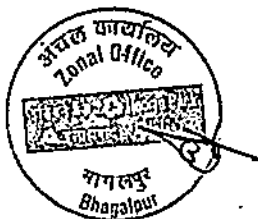
Fire propagation : Test results to BS 476 : Part 6 : 1989 indicate a Class 0 surface.

Smoke and toxic fume emission : The tiles are zero rated for smoke emission. No toxic fumes are given off.

10.1.5. Humidity Resistance

The tiles have excellent moisture resistance and can be used in areas of high humidity including covered external areas, kitchens and bathrooms. Tested in an atmosphere of 95% R.H. at 21 Degree C for 14 days, the tiles did not sag or distort and showed only a minimal increase in weight.

Unlike most other ceiling materials, this important attribute can often be used to speed up the building program by installing the ceiling before the building is fully weathertight.



10.1.6. Biological

GRG tiles will not support the growth of bacteria or other micro – organisms.

10.1.7. Lifespan

Under normal conditions GRG tiles will not deteriorate and can be expected to last the lifetime of the building.

10.1.8. Suspension system is standard 24mm table exposed metal grid. GRG exposed metal grid systems are designed for maximum strength. The grid features main runners and cross tees performed from galvanised steel to RS 7989 7-18 zinc coating min tensile strength 270 Mpa. Grid systems are designed to satisfy ASTM C635 loading and deflection criteria. The main and cross runners are provided with beyonet couplings top brick runners are provided with beyonet couplings for brick installation. The runners are pre-slotted to variety of layouts. Main and cross runners are provided with a coil coated steel capping on the exposed table in off-white colour. Cappings in other colours are available on request.

Grid system features main and cross tees 38 mm high. The grid is suspended from the roof with GI wire roads of quick adjustment suspension hangers at maximum 1200 mm along the main runners.

GRG tiles are designed for lay-in mounting from below into standard grid.

Tiles grid suspension systems are made in association with Chicago Metallic, belgium.

10.1.9. Site Work

a) Transport, Handling and Storage

GRG tiles are supplied packed in cardboard carton. Cartons should be transported and stacked in the vertical position only, never flat. The stack should be a maximum of three cartons high. Similarly, tiles should be stacked vertically when awaiting fixing.

b) Installation

Main tees should normally be fixed at 1200 mm centres with hangers every 1200 mm along the length of the tee. The tees would be infilled with 1200 mm and 600mm cross tees. The grid manufacturer's recommendations should be followed at all times. Hangers to be fixed to roof by expansion fastners.

For light fittings, grills diffusers and cutouts etc. have to be provided additional members of frame works as per direction of Architects / Employer.



#### 10.1.10. Mode of Measurements

The measurement shall be square metres for the finished exposed area.

Rate to include : Apart from other factors mentioned elsewhere in this contract, the rates for items of false ceiling work shall include for the following:

- a) All labour, materials, equipments, scaffolding, hardware fittings, etc. for carrying out the works as per drawing.

#### 11. STANDARD SPECIFICATIONS

Unless otherwise specified elsewhere in this contract, all work under this contract shall be carried out in accordance with the technical specification and the latest issue of the Indian Standard Specification applicable to the particular class of work. If Indian Standards are not formulated for any particular material of work, the relevant British Standard Specification shall apply. Relevant issue of I.S. specifications applicable to the particular work have been described along with the specification for the respective works. In case of any confusion or dispute regarding the meaning and interpretation of any specification for the respective works, the decision of the Owner / Architects shall be final and binding on the contractor.

#### 12.0. PARTITIONS

##### 12.1. Frame Work

Modular Partitions will have a thickness of 40mm and the width and height will be as per drawing & specifications. The vertical members will be made from 40 x 40 x 1.2mm M.S. pipes and the horizontal members from 40x20x1.2 mm M.S. pipes.

Low height partitions will be free standing and self-supporting. In full height partitions the vertical members will be jacked under tension to the main ceiling / beam bottom (as the case may be). Both, low height and full height partitions will be provided with levelling systems to adjust the partitions to unevenness and differences in floor and ceiling levels.

##### 12.2. Skirting

Low Height Partitions will be provided with a box type skirting raceways for wire management, either along the base and/or at table height as per drawing. The skirting will have a height of 130mm and thickness of 40mm and will be fabricated out of 20 swg M.S. sheet. There will be an openable cover on one side for easy access to carry out electrical installations and maintenance.



In full height partitions, the skirting cover will have a height of 130mm and a thickness of 40mm. The skirting will be approachable from both sides and will have channels for adjustment for floors. Box type raceway can be provided at table height.

### 12.3. Doors

The vertical members as well as the top horizontal members will be made of 40 x 40 x 1.2 mm M.S. pipes. The bottom horizontal member will be of 40 x 20 x 1.2 mm M.S. pipes with skirting and telescopic "C" channel for adjustments upto 20mm to flooring and carpet levels. The doors will be fixed on pivots and will have door closers and locking arrangement.

### 12.4. Finishes

Partitions and Doors are available within fill panels in the following finishes :

- a) P.F. bonded exterior grade Prelaminated board of 8mm thickness (on both sides)
- b) Fabric cladded softboard of 12mm thickness (on both sides)
- c) Glass of 6mm thickness in clear or tinted, as specified.
- d) Wood veneer of 3.5mm thickness, as specified.

Various combination of the above finishes on all the sides can be provided as specified by the Architects / Employer.

All the in-fill panels in doors and partitions are fitted by using aluminium profiles and PVC extrusions are used as trimmings.

Phenol formaldehyde bonded exterior grade prelaminated boards shall be of any shade as per drawing and direction.

All metal sections, fabricated M.S. components and aluminium profiles are finished in epoxy powder coating of a thickness 50 microns. The standard shades are Grey, Black and Brown or as specified by Architect / Employer.

### 12.5. Table and Work surfaces

Table will be comprised of :

- a) Table Top : Fabricated out of 18mm particle board finished with 1.5mm laminate on top. The top shall be supported by a frame fabricated out of 25 x 25 x 1.2 mm M.S. pipe and 25 x 25 x 1.2 mm M.S. angle for additional strength. The frame will have the necessary provisions for suspending drawer units and fixing of sides.



- b) Modesty Panel (Apron) will be fabricated out of 18mm P.F. bonded exterior grade prelaminated particle board duly lipped with necessary knock-down fittings to fix the two sides.
- c) Board side will be fabricated out of 18mm thick P.F. bonded exterior grade prelaminated particle board duly lipped with necessary hardware for fixing.
- d) Metal side will be fabricated out of 25x25x1.2 mm M.S. pipe with necessary hardware for fixing the same.

All board component tops, sides etc. are finished with laminate of approved shade, quality & thickness. All the edges are to be chamfered at 45 degree.

The distribution of components in various tables / work surface is as follows :

1. Board Side Table : will consist of a top, two board sides and a modesty panel.
2. Metal Side Table : will consist of a top, 2 metal sides and a modesty panel.
3. Table Board / Metal Side : will consist a top, 1 board side, 1 metal side and a modesty panel.
4. Table with 1 Board / Metal Side will consist of a top, 1 metal /board side and the other side will be anchored to the partition.
5. Work Surface : Only the top will be anchored on both sides to the partition. It will also be provided with end metal at board side as per Architect / Employer's requirement.
6. Corner Work Surface will be attached to the frame of work surfaces / tables. It will consist of a top and metal / board side in the case of an independent work surface.

#### 12.6. Drawer Units

- a) Suspended Drawer Unit : The drawer facia is to be fabricated out of 18mm P.F. bonded exterior grade prelaminated particle board. The sides are fabricated out of 18mm thick P.F. bonded exterior grade prelaminated particle board. The top, bottom and back are fabricated out of 8mm P.F. bonded exterior grade prelaminated particle board.

The drawers are to be fabricated out of M.S. sheets and assembled with drawer runners for smooth operation. A single central locking system is to be provided. The drawers are available in two types viz. 2D and 3D. All metal components will be finished in black epoxy coating.

- b) Mobile Drawer Unit : The facia, top and sides will be fabricated out of 18mm thick P.F. bonded exterior grade prelaminated particle board. The back will be of 8mm thick P.F. bonded exterior grade prelaminated particle board. These will be fitted to the frame fabricated out of 25 x 25 x 1.2 mm pipe fitted with lockable castors. The drawers will be similar to suspended drawer units. All Metal Components will be finished in black epoxy powder coating and are available in three types viz. 2D, 3D and 4D.



- c) Pencil Drawer : will be fabricated out of M.S. sheets and the facia will be made of P.F. bonded exterior grade prelaminated particle board of 18mm thickness. The smooth movement will be ensured by drawer runners (The pencil drawer will not have a lock and handle) and all metal components will be finished with black epoxy powder coating.
- d) Key Board Drawer : will be fabricated entirely out of M.S. sheet. It has an ergonomical fitting and table mounting adjustment. The key board drawer moves on drawer runners for smooth operation and is not provided with a lock. Finishing will be in black epoxy coating.

#### 12.7. Vertical Storage Unit

All components – top, bottom, sides, shutters and shelves are fabricated out of 18mm thick P.F. bonded exterior grade prelaminated particle board and the back of 8mm thick P.F. bonded exterior grade prelaminated particle board. Will be mounted on a 150mm box stand fabricated out of M.S. sheet with a system for levelling and the necessary knock down fittings, lock and stoppers will be provided.

All board components edges are finished in laminate and chamfered at 45 degree.

- 12.8. The top is finished with laminate. The top, bottom and sides are to be fabricated out of 18mm thick P.F. bonded exterior grade pre-laminated particle board with necessary knock down hardware fittings.

The shutter is fabricated out of 12 mm thick P.F. bonded exterior grade prelaminated particle board with necessary wheels for easy sliding of the shutters.

The back is fabricated out of 8mm thick P.F. bonded exterior grade prelaminated board.

It is mounted on a 150 mm box stand fabricated out of M.S. sheet with a system for levelling.

