**M2/12/1200010002/BRK Specifications**

|  |
| --- |
| 1. **SIDE DESK (RH/LH) - Top Particle Board 25MM - QTY: – 12 Nos.**   **Material Code No. HY5111762019** |
| Side Desk material consists of attached side top made of high density particle board with melamine lamination, with  post forming, free standing legs and consists key board tray and CPU Stand. |
| **TOP:-** Side Desk Top material consists of high density particle board with malamine lamination, 25 mm thickness.  One side of Side desk top should be fixed to the main office desk top, with powder coated iron brackets made of HR Steel.  Size: 1000 mm (L) x 500 mm (W)  **EDGE PROFILE:-** Edge shall be full round.  **UNDER** **STRUCTURE:**  **LEGS:-** Made from 25 mm thickness pre-laminated particle board, having straight profile with full round edges and clad with post forming laminate. Size: 400 mm (W) x 650 mm (H) - 1 No.  **MODESTY:-** Modesty panel has to be made from pre-laminated board of 18 mm thick having straight profile with post forming laminate. One side of modesty shall be fixed with powder coated iron brackets made of HR Steel to the leg of Main Office Desk and other side shall be fixed with powder coated iron brackets made of HR Steel to the leg of Side Desk. Size: 1050 mm (L) x 700 mm (W) - 1 No.  **NOTE:- Round shape openings (60 mm dia) shall be made in the corners of Top panels of Main Office Desk and Side Desk, along with PVC round caps for running of power, data and voice cables.**   1. **MEDIUM BACK MAIN CHAIR -with armrest – QTY: 10 Nos.**   **Material Code No. HY7802161657**  **SEAT / BACK ASSEMBLY:-** The seat / back are to be made of 12 mm thick hot pressed ply wood, upholster with changeable upholstery fabric covers and moulded polyurethane foam, together with moulded back - spine cover. The back foam is to be designed with counter lumbar support for extra comfort. The Polyurethane foam is moulded with density - 45 ± 2 Kg/Cu. m and hardness = 20 ± 2 on hampden machine at 25% compression. Rear side of the Back rest and bottom of the Seat shall be covered with Black Polypropylene covers.  Seat Height : 415 mm to 530 mm  Height of Chair: 930 mm to 1050 mm  Back Rest Size: 450 mm (W) x 530 mm (H)  **ARM REST:-** Arm rest are to be made of Black integral skin polyurethane with 50 to 70 shore hardness and reinforced with MS insert. The arm rest should be scratch and weather resistant. The arm rest are to be fitted to the seat and back with arm rest connecting strip assembly, made of 0.5 Cm thick HR steel.  **PERMEANENT CONTACT MECHANISM:-** The permanent contact mechanism with 360 degree revolving facility and provision for back tilt arrangement. Required facility for tilt tension adjustment has to be provided.  **HEIGHT ADJUSTMENT:-** The Gas lift for height adjustment may be of personalized choice, with upright position locking arrangement.  **TELESCOPIC BELLOW ASSEMBLY:-** The bellow with three piece telescopic type and injuction moulded in Black poly propylene.  **PEDESTAL ASSEMBLY:-** The pedestal has to be fabricated using 0.2 Cm thick CR Steel, powder coated and fitted with an injuction moulded in Black Polypropylene hub cap. 5 Nos. of twin wheel castors are to be provided. The castor wheels made of Nylon material and twin wheel castors with hood for extra protection may be used. |

1. **VISITOR CHAIR (NON-REVOLVING TYPE) –QTY: 43 Nos.**

**Material Code No. HY7802161665**

**SEAT / BACK ASSEMBLY:-** The seat / back are to be made of 12 mm thick hot pressed ply wood, upholster with changeable upholstery fabric covers and moulded polyurethane foam, together with moulded back - spine cover. The back foam is to be designed with counter lumbar support for extra comfort. The Polyurethane foam is moulded with density - 45 ± 2 Kg/Cu. m and hardness = 20 ± 2 on hampden machine at 25% compression.

Rear side of the Back rest and bottom of the Seat shall be covered with Black Polypropylene covers.

Seat Height : 440 mm

Height of Chair: 805 mm

Width of Chair: 550 mm

Depth of Chair: 610 mm

**ARM REST:-** Arm rest are to be made of Black integral skin polyurethane with 50 to 70 shore hardness and reinforced with MS insert. The arm rest should be scratch and weather resistant. The arm rest are to be fitted to the seat and back with arm rest connecting strip assembly, made of 0.5 Cm thick HR steel.

1. **IRON FIXED PEDESTAL DRAW UNIT- QTY-32 Nos.**

**Material Code No. HY7802161673**

Iron fixed metal pedestal with three drawer of size 400 mm (W) x 450 mm (D) x 660 mm (H). Drawers shall be sliding type, bottom drawer height shall be 300 mm, height of the middle and top drawer shall be equal size. Drawers shall be with locking arrangement with two keys. The metal gauge of the cabinet shall be 20. Bottom of Iron fixed Pedestal shall be fixed with suitable bushes.

1. **VERTICAL STORAGE WITH SLIDING DOOR UNIT – QTY: 15 Nos.**

**Material Code No. HY7802161681:**

**Construction:** CRCA steel conforming to IS 513 Gr. D. with metal door and wooden top. The minimum thickness of CRCA steel is 1.00 mm and the thickness of pre laminated particle board is 25 mm. The edges of PLB are to be finished with 2mm thick PVC lipping. Provision of metal top (below PLB) has to be ensured.

**Dimensions:** 900 mm (W) 450 mm (D) x 1200 mm(H) approx.

**Sliding door arrangement:** Full height sliding door with top hanging arrangement to prevent derailment. Each door shall be provided with two plastic rollers having steel ball bearing for smooth movement of door.

**Locking & Handle:** Aesthetically appealing die cast 5 lever cam lock with 2 keys. Keys should have unique system such that interchangeability with other unit is not there. Handle shall be of plastic flush & recessed modal.

**Shelves:** CRCA steel confirming to IS 513 Gr. D thickness 1.00 mm (minimum) – height wise adjustable shelf mounting. Uniformly distributer load carrying capacity of 70 kg maximum for each self. Two numbers of adjustable shelves per storage unit. (3 levels formed by 2 Nos. of adjustable shelves).

**Painting:** Epoxy polyester powder coated to the thickness of minimum 40 microns. Before powder coating, metal surfaces are to be treated for antirust.

1. **EXECUTIVE OFFICE DESK- QTY: 3 Nos.**

**Material Code No. HY7802161690**

Main Executive Office Desk consists of Main Desk Top, attached side desk top, made of high density particle board with melamine lamination, with post forming legs for main desk and free standing legs for side desk and consists key board tray, Wooden Mobile Pedestal Draw Unit and CPU Stand.

**MAIN DESK TOP:-** Main Desk Top material consists of high density particle board with melamine lamination, the table top consists of 25 mm thickness. Bottom of the top at front side shall be supported with member of pre-laminated particle board in curved shape i.e. 75 mm in the middle and 25 mm at the ends.

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

Both sides of the top shall be supported with member of pre-laminated particle board in curved shape i.e. 75 mm in the middle and 25 mm at the ends, as shown in photograph.

**EDGE PROFILE: -** Edge Profile of the top shall be full round.

**UNDER STRUCTURE:-**

**LEGS:-** Made from 20 mm thickness pre-laminated particle board, having straight profile with full round edges and clad with post forming laminate.

Size: 775 mm (W) x 725 mm (H) - 2 Nos.

**EDGE PROFILE:-** Edge profile of the legs shall be extended with member of pre-laminated particle board in curved design i.e. by 75 mm in 45 degrees angle, as shown in photograph.

**MODESTY:-** Modesty panel has to be made from pre-laminated board of 18 mm thick having straight profile with post forming laminate. The modesty panel shall be fixed to the top and legs of Main Executive Office Desk, with powder coated iron brackets made of HR Steel. Size: 1560 mm (L) x 725 mm (W) - 1 No.

1. **SIDE DESK (RH / LH) TOP PARTICLE BOARD 25MM - QTY: 3 Nos.**

**Material Code No. HY7802161703**

Side Desk (RH/LH) material consists of attached side top made of high density particle board with melamine lamination with post forming, free standing legs and consists key board tray and CPU Stand.

**TOP:-** Side Desk Top material consists of high density particle board with melamine lamination, 25 mm thickness. One side of Side desk top should be fixed to the main office desk top, with powder coated iron brackets made of HR Steel. Other side of Desk Top shall be rested on fixed pedestal draw unit, with 4 Nos. of round shaped wooden chairs.

Size: 1195 mm (L) x 600 mm (W)

**EDGE PROFILE:-** Edge profile shall be full round.

**Note:- Round shape openings (60 mm dia) shall be made in the corners of Top panels of Main Desk Top / Side Desk Top, as per requirement, along with PVC round caps for running of power, data and voice cables.**

**MODESTY:-** Modesty panel has to be made from pre-laminated board of 18 mm thick having straight profile with post forming laminate. The modesty panel shall be fixed to the top and legs of Main Executive Office Desk, with powder coated iron brackets made of HR Steel. Size: 1560 mm (L) x 725 mm (W) - 1 No.

1. **WOODEN MOBILE PEDESTAL DRAW UNIT – QTY- 3 Nos.**

**Material Code No. HY7802161711**

Material consists of high density particle board with melamine lamination, with 3 Nos. of Castor wheels in front side of the unit (Two big wheels and one small wheel) and 2 Nos. of Castor wheels at rear side of the unit to be provided, having two drawers of size 400 mm (W) x 495 mm (D) x 500 mm (H). Top plank shall be thickness of 25 mm with half round edge profile at front side. Drawer shall be sliding type with high quality sliding units. Bottom drawer height shall be 300 mm and height of the top drawer shall be 150 mm, as shown in photograph. Drawers shall be with locking arrangement with two keys.

1. **WOODEN FIXED PEDESTAL DRAW UNIT – QTY: 3 Nos.**

**Material Code No. HY7802161720**

Material consists of high density particle board with melamine lamination, having three drawers of equal size of 400 mm (W) x 495 mm (D) x 150 mm (H). Top plank shall be thickness of 25 mm with half round edge profile at front side. Drawer shall be sliding type with high quality sliding units. Drawers shall be with locking arrangement with two keys. The fixed pedestal unit shall be fixed with 4 Nos. of legs of size 100 mm (H). The fixed pedestal unit shall be fixed with 4 Nos. of chairs of size 100 mm (H) at top of the unit and side desk top, as shown in photograph.

|  |
| --- |
| 1. **HIGH BACK REVOLVING CHAIR: QTY - 3 Nos.**   **Material Code No. HY7802161738**  **SEAT / BACK ASSEMBLY:-** The seat / back are to be made of 12 mm thick hot pressed ply wood,  upholster with changeable upholstery fabric covers and moulded polyurethane foam, together  with moulded back - spine cover. The back foam is to be designed with counter lumbar support for extra comfort.  The Polyurethane foam is moulded with density - 45 ± 2 Kg/Cu. m and hardness = 20 ± 2 on hampden machine  at 25% compression. Rear side of the Back rest and bottom of the Seat shall be covered with Black  Polypropylene covers.  Seat Height : 415 mm to 530 mm  Height of Chair: 1000 mm to 1120 mm  Back Rest Size: 500 mm (W) x 650 mm (H)  **ARM REST:-** Arm rest are to be made of Black integral skin polyurethane with 50 to 70 shore hardness and reinforced with MS insert. The arm rest should be scratch and weather resistant. The arm rest are to be fitted to the seat and back with arm rest connecting strip assembly, made of 0.5 Cm thick HR steel.  **PERMEANENT CONTACT MECHANISM:-** The permanent contact mechanism with 360 degree revolving facility and provision for back tilt arrangement. Required facility for tilt tension adjustment has to be provided.  **HEIGHT ADJUSTMENT:-** The Gas lift for height adjustment may be of personalized choice, with upright position locking arrangement.  **TELESCOPIC BELLOW ASSEMBLY:-** The bellow with three piece telescopic type and injuction moulded in Black poly propylene.  **PEDESTAL ASSEMBLY:-** The pedestal has to be fabricated using 0.2 Cm thick CR Steel, powder coated and fitted with an injuction moulded in Black Polypropylene hub cap. 5 Nos. of twin wheel castors are to be provided. The castor wheels made of Nylon material and twin wheel castors with hood for extra protection may be used.  **12. VERTICAL STORAGE WITH SLIDING DOOR UNIT (SMALL) –**  **QTY:** **22 Nos.**  **Material Code No. HY7802161746**  **Storage unit:** Required for the storage of variety of documents, office files, stationary items, manuals, documents etc.  **Construction:** CRCA steel conforming to IS 513 Gr. D. with metal door and wooden top. The minimum thickness of CRCA steel is 1.00 mm and the thickness of pre laminated particle board is 25 mm. The edges of PLB are to be finished with 2mm thick PVC lipping. Provision of metal top (below PLB) has to be ensured.  **Dimensions:** 900 mm (W) x 450 mm (D) x 750 mm(H) approx.  **Sliding door arrangement:** Full height sliding door with top hanging arrangement to prevent derailment. Each door shall be provided with two plastic rollers having steel ball bearing for smooth movement of door.  **Locking & Handle:** Aesthetically appealing die cast 5 lever cam lock with 2 keys. Keys should have unique system such that interchangeability with other unit is not there. Handle shall be of plastic flush & recessed modal.  **Shelves:** CRCA steel confirming to IS 513 Gr. D thickness 1.00 mm (minimum) – height wise adjustable shelf mounting.  Uniformly distributer load carrying capacity of 70 kg maximum for each self. Two numbers of adjustable shelves per storage unit.  ( 2 levels formed by 1 No. of adjustable shelf).  **Painting:** Epoxy polyester powder coated to the thickness of minimum 40 microns. Before powder coating, metal surface sare to be treated for antirust.   1. **CONFERENCE HALL TABLE (14 SEATER) –** **QTY: 1 Nos.**   **Material Code No. HY7802161754**  **TOP:-** Top work surface Thickness : 37.5 mm (18mm +18mm baton <skirting>+1mm DL+0.4mm membrane).  **Edge profile:** Water fall edge with radius of 18mm (approx.) on top edge. Substrate MDF.  **Skin:** PVC membrane foil (0.4 mm thick clad on the substrate of MDF using PU glue for better scratch resistance  **UNDER STRUCTURE:-**  **LEGS:-** Made from 36mm pre laminated particle board (18+18) having a straight profile with half round edges and clad with 0.6mm thick post forming laminate. Overall thickness of leg=38mm  **MODESTY:-** Modesty panel has to be made from pre laminated twin board of 18mm thick.  **SIZE:-** 5400mm (L) x 1400mm (W) x 750mm (H)  Approx. size of two seater = 1350mm (W) x 600mm (D)  Approx. size of Half round (2 seater) = R 700 mm   1. **CUSHION CHAIRS (REVOLVING TYPE)** **–** **QTY: 47 Nos**   **Material Code No. HY7802161762**  **Seat/ Back Assly:** The seat and Back are to be made of 12 mm thick hot pressed plywood, upholstered with changeable fabric upholstery covers and moulded polyurethane foam, together with moulded back –spine cover. The back foam is to be designed with counter lumbar support for extra comfort.  **Seat ply size (Approx):** 45 cm (W) x 53 cm (H)  **Polyurethane foam :** The polyurethane foam is moulded with density=45+/- 2Kg /cu.mtr and Hardness= 20+/- 2 on Hampden machine at 25 % compression.  **Armrests:** The armrests are to be made of black integral skin polyurethane with 50-70 shore hardness and reinforced with MS insert. The armrests should be scratch and weather resistant. The armrests are to be fitted to the seat with seat/ armrest connecting strip assly made of 0.5 cm thick HR steel.  **Permanent contact mechanism :** The permanent contact mechanism with 360 degree revolving facility and provision for back tilt arrangement. Required facility for tilt tension adjustment has to be provided.  **Height adjustment:** The gas lift for height adjustment may be of personalized choice with upright position locking arrangement.  **Telescopic below assly:** The below with 3 piece telescopic type and injection moulded in black polypropylene.  **Pedestal Assly:** The pedestal has to be fabricated using 0.2cm thick CR. Steel, powder coated and fitted with an injection moulded in black polypropylene hub cap. 5 Nos of twin wheel castors are to be provided. The castor wheels made of nylon material and twin wheel castors with hood for extra protection may be used.  **Dimensions (Approx.):**  Seat height = 41.5 - 53.5 cm.  Height of chair = 93.5 – 105.5 cm  Width of chair = 70 cm  Depth of chair = 70 cm   1. **EXECUTIVE OFFICE DESK –** **QTY: 12 Nos**   **Material Code No. HY7802161770**  Main Office Desk consists of Desk Top, attached side desk, top made of high density particle board with melamine lamination, with post forming legs for main desk and free standing legs for side desk and consists key board tray and CPU Stand.  **TOP: -** Main Office Desk Top material consists of high density particle board with melamine lamination, the  table top consists of 25 mm thickness.  Size: 1500 mm (L) x 750 mm (W)  **EDGE PROFILE:-** Edge shall be full round.  **UNDER STRUCTURE:-**  **LEGS:-** Made from 20 mm thickness pre-laminated particle board, having straight profile with full round edges and clad with post forming laminate. Size: 650 mm (W) x 700 mm (H) - 2 Nos.  **MODESTY:-** Modesty panel has to be made from pre-laminated board of 18 mm thick having straight profile with post forming laminate. The modesty panel shall be fixed to the top and legs of Main Office Desk, with powder coated iron brackets made of HR Steel. Size: 1300 mm (L) x 700 mm (W) - 1 No. |
|  |
|  |
| 1. **WORK STATION (ALUMINIUM FRAME) –QTY:** **5 Nos**   **Material Code No. HY7802161908**   |  |  | | --- | --- | |  |  | |  | Work Station model consisting of partition panels of 32 mm Aluminium frame, fabricated panels and glass on the upper portion, 1325 mm height. Work top of 25 mm thick high density particle board, with malamine lamination. Each module consists of four persons seating capacity. Each work station will be of dimension of 2450 mm (L) x 1550 mm (W) x 1250 mm (H). Each work station shall be provided with key board tray and CPU stand.   1. **CONFERENCE HALL TABLE 8 SEATER – QTY: 1 NO**      |  | | --- | | **CONFERENCE HALL TABLE (8 SEATER)** | | **Material Code No. HY7802161789** | |  | | **TOP:-** Top work surface Thickeness : 37.5 mm (18mm +18mm baton <skirting>+1mm DL+0.4mm membrane).  **Edge profile:** Water fall edge with radius of 18mm (approx.) on top edge. Substrate MDF.  **Skin:** PVC membrane foil (0.4 mm thick clad on the substrate of MDF using PU glue for better scratch resistance. | |  | | **UNDER STRUCTURE:-** | |  | | **LEGS:-** Made from 36mm pre laminated particle board (18+18) having a straight profile with half round edges and clad with 0.6mm thick post forming laminate. Overall thickness of leg=38mm | |  | | **MODESTY:-** Modesty panel has to be made from pre laminated twin   board of 18mm thick. | |  | | **SIZE:-** 3100 mm (L) x 1400 mm (W) x 750 mm (H)  Approx. size of two seater = 1350 mm (W) x 600 mm (D)  Approx. size of Half round (2 seater) = R 700 mm | | |

**18, 19 & 20 SPECIFICATION FOR DRIVE TYPE OPTIMIZER STORAGE SYSTEM**

**Optimizer Storage System:-**  An efficient space saving storage arrangement catering to a variety of office requirements for storage of office files, stationary items, manuals, documents etc.

**Three Bay Drive Type Optimizer**

The Optimizer shall be of Box cladded structure with 0.8 mm (minimum) thickness CRCA Steel confirming to IS: 513 Gr. D for back, side and top sheets. Each body block building consists of one main unit & then Add-on units (1, 2 & 3 – depending on no. of bays 1, 2 & 3). Double faced twin mobile blocks are to be placed in between Single face movable first unit and Single face fixed last unit. The number of Double faced mobile blocks will be specified by BHEL as per requirement and feasibility of room sizes.

1. **THREE BAY - SINGLE FACED - FIXED LAST UNIT: (HY7802167604) – 1No.**

Dimension of the above units are given below:

1. Width : 900MM X 3 Nos.
2. Depth: 450MM X 3 Nos.
3. Height : 2500 MM
4. No. of loading levels / shelves: 5 Nos.
5. **THREE BAY - SINGLE FACED – MOVABLE FIRST UNIT: (HY7802167612) – 1No.**

Dimension of the above units are given below:

1. Width : 900MM X 3 Nos.

1. Depth: 450 X 3 Nos.
2. Height : 2500 MM

4. No. of loading levels / shelves: 5 Nos.

1. **THREE BAY - DOUBLE FACED - MOVABLE MIDDLE UNITS: (HY7802167663) – 12 Nos.**

Dimension of the above units are given below:

1. Width : 900MM X 3 Nos X 2 SIDES

1. Depth : 450MM X 3Nos X 2 SIDES
2. Height : 2500 MM
3. No. of loading levels / shelves: 5 Nos X 2 SIDES

Details of Double faced movable Units (Twin mobile with Centre partition) are given below:

1. Two units of same size of individual block, as mentioned in ‘A’ shall be integrated.

2. No. of loading levels: As per requirement, number of shelves will be indicated in tender enquiry.

The above body units are to be bolted to the undercarriage. The approximate height of undercarriage shall be 65 mm (approx.) and height of rails shall be 35 mm (approx.).

**Painting:** The steel bodies including shelves are to be treated for antirust surface and powder coated with approved colour. The final finish shall be of epoxy polyester powder coating with a dry film thickness of minimum 40 microns. Before powder coating, metal surfaces are to be treated for anti-rust and cleaned properly.

**Partitions / Accessories for Optimizers:**

1. Total height from ground level shall be approx. 100 mm more than the height of super structure (height of super structure + 65 mm undercarriage + 35 mm channel).
2. General arrangement as per enclosed sketches.
3. Under carriage shall be of fabricated type using structural steel sections.
4. Bolted construction for superstructure with steel slotted / rolled / formed angles (as required), corner plates, electroplated / galvanized nuts & bolts are to be used.
5. All-load bearing shelves shall be of 1.0 mm (minimum) thickness CRCA steel sheet with allowable load carrying capacity of 70 Kg per shelve.
6. One number of acrylic or metallic card holder has to be provided in every block.
7. Suitable square steel bright bar / channels of suitable sizes are to be used for rails for smooth operation.
8. Drive Wheel: For the movement of units, a drive wheel and sprocket-chain mechanism with provision for manual locking of individual units, when in use has to be provided.
9. Centralized locking arrangement has to be provided through locking stiffener mounted onto the back of single last unit so that it gets locked on channels when all the units are brought together.
10. Each single face units / optimizers has to be provided with doors 0.8 mm (minimum) thickness CRCA Steel confirming to IS:513 Gr. D, with independent locking system, for manual locking of individual units when a person is using those units.
11. Each Drive Type Unit has to be provided with locking knob near the Drive Wheel for manual locking of individual units when a person is using those units.

**General:**

1. The proposed system is Drive Type Optimizer with Drive wheels fitted. The system shall be such that the manual effort required for opening / closing of the rack is minimum.
2. Required length and number of rails / channels are to be provided for each system.
3. Suitable elegant drive wheels shall be provided on the mobile blocks, for opening and closing.
4. The aisle width shall be sufficient enough for a person to enter inside and access either side of the storage racks. The equipment is to be guaranteed its satisfactory performance for 12 months from the date of installation.