

V) Specifications

Sl. No.	BHEL Terms	Supplier's Compliance
1	Inspection of Samples:- Vendors shall keep samples of the offered models ready for inspection at Suppliers works. BHEL technical committee shall visit for inspection of samples and technical qualification will be done based on the Inspection report submitted by the BHEL technical committee. Supplies shall be in line with the approved samples.	
2	Photographs: Vendor shall submit the photograph with detailed specification of their furniture model in their technical offer against each item of furniture specified in the tender enquiry of BHEL.	
3	Supply of furniture should consist "Supplying, fixing / erection / commissioning at different site locations at BHEL R C Puram Unit premises".	
4	The tenderer shall visit the site and make himself thoroughly acquainted with the local site conditions, nature and requirement of furniture to avoid any deviations / discrepancies during submission of quotation / supply of furniture as per requirement.	
5	The vendor has to arrange himself for transportation of materials to all leads and lifts and should keep the premises neat and clean by removal and disposal dirt and garbage time to time during erection and commissioning of furniture.	
6	During supply, erection & commissioning any material found damaged/defective/ broken, shall be replaced within 15 days.	
7	The supplies shall be in line with approved samples.	
8	The supplies shall be inspected and approved by respective Indenting departments at BHEL site before erection and commissioning.	
9	Colour of the Furniture will be decided by the BHEL based on options given by the Supplier and will be finalised while placement of P.O.	
Item No.	Detailed Specifications	Supplier's Compliance
1	<p>EXECUTIVE OFFICE DESK FOR EXECUTIVES:-</p> <p>Material Code No. HY7802161770</p> <p>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.</p> <p>TOP:- Main Office Desk Top material consists of high density particle board with melamine lamination, the table top consists of 25 mm thickness.</p> <p>Size: 1500 mm (L) x 750 mm (W)</p> <p>EDGE PROFILE:- Edge shall be full round.</p> <p>UNDER STRUCTURE:-</p> <p>LEGS:- Made from 20 mm thickness pre-laminated particle board, having straight profile with full round edges and clad with post forming laminate.</p> <p>Size: 650 mm (W) x 700 mm (H) - 2 Nos.</p> <p>LEGS:- Made from 20 mm thickness pre-laminated particle board, having straight profile with full round edges and clad with post forming laminate.</p> <p>Size: 650 mm (W) x 700 mm (H) - 2 Nos.</p>	
2	<p>SIDE DESK (RH/LH) FOR EXECUTIVES :-</p> <p>Material Code No. HY5111762019</p> <p>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.</p> <p>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.</p> <p>Size: 1000 mm (L) x 500 mm (W)</p> <p>EDGE PROFILE:- Edge shall be full round.</p> <p>UNDER STRUCTURE:-</p> <p>LEGS:- Made from 25 mm thickness pre-laminated particle board, having straight profile with full round edges and clad with post forming laminate.</p> <p>Size: 400 mm (W) x 650 mm (H) - 1 No.</p> <p>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.</p> <p>Size: 1050 mm (L) x 700 mm (W) - 1 No.</p> <p>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.</p>	
3	<p>IRON MOBILE PEDESTAL DRAW UNIT:-</p> <p>Material Code No. HY7802161673</p> <p>Iron Mobile 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 20mm. Bottom of Iron fixed Pedestal shall be fixed with suitable wheels.</p>	

4	<p>LOW BACK CUSHIONED CHAIR (NON-REVOLVING TYPE):-</p> <p>Material Code No. HY7802161665</p> <p>SEAT / BACK ASSEMBLY:- The seat / back are to be made of 12 mm thick hot pressed ply wood, upholsted 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 Hamden machine at 25% compression. Rear side of the Back rest and bottom of the Seat shall be covered with Black Polypropylene covers.</p> <p>Seat Height : 440 ± 10 mm</p> <p>Height of Chair: 820 ± 10 mm</p> <p>Width of Chair: 580 ± 10 mm</p> <p>Depth of Chair: 620 ± 10 mm</p> <p>Back Size: 490 ± 10 mm X 480 ± 10 mm</p> <p>Seat Size: 440 ± 10 mm X 480 ± 10 mm</p> <p>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.</p> <p>Base of the chair shall be fixed to the frame made of black powder coated MS Pipe with suitable fixtures. Pipe outer dia shall be 25 mm. Suitable Nylon bushes shall be fixed to the bottom of the MS Pipe frame.</p> <p>TUBULAR FRAME:- The tubular frame is cantilever type and made of Dia 2.54 cm (1") x 14 B.G.M.S. E.R.W. tube and black powder coated.</p> <p>DESIGN & COLOUR BASIC:- As per BHEL choice.</p>	
5	<p>VERTICAL STORAGE WITH SLIDING DOOR UNIT (BIG):-</p> <p>Material Code No. HY7802161681</p> <p>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.</p> <p>Dimensions: 900 mm (W) 450 mm (D) x 1200 mm (H) approx.</p> <p>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.</p> <p>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.</p> <p>Shelves: CRCA steel confirming to IS 513 Gr. D thickness 1.00 mm (minimum) – height wise adjustable shelf mounting. Uniformly distributor 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).</p> <p>Painting: Epoxy polyester powder coated to the thickness of minimum 40 microns. Before powder coating, metal surfaces are to be treated for antirust.</p>	
6	<p>EXECUTIVE OFFICE DESK FOR SENIOR EXECUTIVES:-</p> <p>Material Code No. HY7802161690</p> <p>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.</p> <p>MAIN DESK TOP:-</p> <p>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.</p> <p>Size: 1800 mm (L) x 900 mm (W)</p> <p>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.</p> <p>EDGE PROFILE:-</p> <p>Edge Profile of the top shall be full round.</p> <p>UNDER STRUCTURE:-</p> <p>LEGS:-</p> <p>Made from 20 mm thickness pre-laminated particle board, having straight profile with full round edges and clad with post forming laminate.</p> <p>Size: 775 mm (W) x 725 mm (H) - 2 Nos.</p> <p>EDGE PROFILE:-</p> <p>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.</p> <p>MODESTY:-</p> <p>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.</p> <p>Size: 1560 mm (L) x 725 mm (W) - 1 No.</p>	

7	<p>SIDE DESK (RH / LH) FOR SENIOR EXECUTIVES:-</p> <p>Material Code No. HY7802161703</p> <p>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.</p> <p>TOP:-</p> <p>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.</p> <p>Size: 1195 mm (L) x 600 mm (W)</p> <p>EDGE PROFILE:-</p> <p>Edge profile shall be full round.</p> <p>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.</p>	
8	<p>WOODEN MOBILE PEDESTAL DRAW UNIT FOR SENIOR EXECUTIVES:-</p> <p>Material Code No. HY7802161711</p> <p>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. Drawers shall be with locking arrangement with two keys.</p>	
9	<p>WOODEN FIXED PEDESTAL DRAW UNIT FOR SENIOR EXECUTIVES:-</p> <p>Material Code No. HY7802161720</p> <p>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.</p>	
10	<p>HIGH BACK CUSHIONED REVOLVING CHAIR FOR SENIOR EXECUTIVES:-</p> <p>Material Code No. HY7802161738</p> <p>SEAT / BACK ASSEMBLY:- The seat / back are to be made of 12 mm thick hot pressed ply wood, upholstered 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 Hamden machine at 25% compression. Rear side of the Back rest and bottom of the Seat shall be covered with Black Polypropylene covers.</p> <p>Seat Height : 460 ± 10 mm to 580 ± 10mm</p> <p>Height of Chair: 1050 ± 10 mm to 1180 ± 10 mm</p> <p>Back Size: 720 ± 10 mm X 480 ± 10 mm</p> <p>Seat Size: 440 ± 10 mm X 480 ± 10 mm</p> <p>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.</p> <p>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.</p> <p>HEIGHT ADJUSTMENT:- The Gas lift for height adjustment may be of personalized choice, with upright position locking arrangement.</p> <p>TELESCOPIC BELLOW ASSEMBLY:- The bellow with three piece telescopic type and injection moulded in Black poly propylene.</p> <p>PEDESTAL ASSEMBLY:- The pedestal has to be fabricated using 0.2 Cm 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.</p>	
11	<p>Specification for 14 Seater Modular Conference Table</p> <p>Material Code : HY7802161754</p> <p>Main Table tops: Main table tops made of high density MDF board thickness 37.6 mm (18 mm + 18 mm + 0.6 mm DL + 0.4 mm membrane). 14 seater table shall consist the following size of table tops. Wire Management system should be provided.</p> <p>Half round table tops 2 seater – Radius – 713 mm – 2 nos.</p> <p>Two Seater (Rectangular Shape) – 1350 mm (L) x 600 mm (W) – 4 Nos.</p> <p>Rectangular Seater (Square type) – 675 mm (L) x 600 mm (W) – 2 Nos.</p> <p>Edge profile: - Water fall edge profile 10 mm radius on top edge and 5mm at bottom.</p> <p>Top Skin: - PVC Membrane foil (0.4 mm thick) clad on the MDF board using PV glue for better adhesion. This foil is pre-coated with layer of polyurethane for better scratch resistance and PVC membrane shall be terminated up to 6" of depth underneath (bottom) of the table top.</p> <p>Colour : As required</p> <p>Under Structure :</p> <p>Legs: Made from pre-laminated twin boards of 18 mm thick.</p> <p>Wire Carrier : Made from 0.6 mm thick CRCA painted.</p> <p>Carrier cover : Made of 12 mm thick MDF over all painted board.</p> <p>Table Design : As enclosed.</p> <p>Overall table size : 4725 mm (L) x 1400 mm (W) x 750 mm (H).</p>	

12	<p>Specification for 8 Seater Modular Conference Table</p> <p>Material Code : HY7802161789</p> <p>Main Table tops: Main table tops made of high density MDF board thickness 37.6 mm (18 mm + 18 mm + 0.6 mm DL + 0.4 mm membrane). 14 seater table shall consist the following size of table tops. Wire Management system should be provided.</p> <p>Half round table tops 2 seater – Radius – 713 mm – 2 nos.</p> <p>Two Seater (Rectangular Shape) – 1350 mm (L) x 600 mm (W) – 2 Nos.</p> <p>Edge profile: – Water fall edge profile 10 mm radius on top edge and 5mm at bottom.</p> <p>Top Skin : – PVC Membrane foil (0.4 mm thick) clad on the MDF board using PV glue for better adhesion. This foil is pre-coated with layer of polyethylene for better scratch resistance and PVC membrane shall be terminated up to 6” of depth underneath (bottom) of the table top.</p> <p>Colour : As required</p> <p>Under Structure :</p> <p>Legs: Made from pre-laminated twin boards of 18 mm thick.</p> <p>Wire Carrier : Made from 0.6 mm thick CRCA painted.</p> <p>Carrier cover : Made of 12 mm thick MDF over all painted board.</p> <p>Table Design : As enclosed.</p> <p>Overall table size : 2700 mm (L) x 1400 mm (W) x 750 mm (H).</p>	
13	<p>LOW BACK CUSHIONED CHAIR (REVOLVING TYPE):-</p> <p>Material Code No. HY7802161762</p> <p>SEAT / BACK ASSEMBLY:- The seat and back are to be made of 12 mm thick hot pressed ply wood, upholstered 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.</p> <p>POLYURETHANE FOAM : The Polyurethane foam is moulded with density - 45 ± 2 Kg/Cu. m and hardness = 20 ± 2 on Hamden machine at 25% compression.</p> <p>ARM REST : The armrests to be made of black integral skin polyurethane with 50-70 shore hardness and reinforced with MS insert. The armrest should be scratch 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.</p> <p>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.</p> <p>HEIGHT ADJUSTMENT : The gas lift for height adjustment may be personalized choice with upright position locking arrangement.</p> <p>TELESCOPIC BELOW ASSEMBLY : The below with 3 piece telescopic type and injection moulded in black polypropylene.</p> <p>PEDESTAL ASSEMBLY : 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 with hood for extra protection may be used.</p> <p>DIMENSIONS :</p> <p>Seat Height = 46 ± 1 cm – 58 ± 1 cm. Width of Chair = 73 ± 2 cm</p> <p>Height of Chair = 81±1 cm – 95±1 cm, Depth of Chair = 73 ± 2 cm</p> <p>Back Size: 490 ± 10 mm X 480 ± 10 mm</p> <p>Seat Size: 440 ± 10 mm X 480 ± 10 mm</p>	
14	<p>Specification for Mod. Alu. Fr. – 4 Seater Workstation</p> <p>Material Code : HY7802161878</p> <ul style="list-style-type: none"> • The Modular Workstation Partition system shall be combination of panel and tile based system. • The Modular Workstation Partition shall be professional, robust and shall have a thickness of 65 mm (Tolerance - ± 5 mm). • Size: End to end – 3000 mm (L) x 3000 mm (W) x 1350 mm (H) <p>Main Classification</p> <ul style="list-style-type: none"> • Main Frame Structure • Connectors • Panels / Tiles • Trims • External Cladding • Support Systems • Raceways & Cable management <p>Frame Structure</p> <p>The frame of the modular partition systems should have strength to bear all loads. Frame shall be made up with aluminum extruded sections and engineered for strength, flexibility, cable management and support. The structure shall have verticals at the extreme ends for making further combination of frames and horizontal members at different levels like one at the work surface for fixing work top, then one at some height above the top for fixing accessories like book / paper / telephone holder. All the members of the frame shall be metal powder coated with thickness of at least 45 – 50 microns. There should be provision of raceway channel at the skirting level and above the table top level as double raceway cable management system to accommodate data and electrical cable at two different levels. The horizontal members shall have grooves for accessories attachment. All the members of the frame shall have thickness of 1.50 mm. All the members shall be on snap fitting. Workstation frames shall have with floor level adjuster upto 25 mm height. Connectors should have 2-way / 3-way / 4-way with end caps and bushes made of aluminum, partition top rails and ports made of curved aluminum profile. In fill of partitions frame shall be made of selected fabric / laminate / glass / magnetic white board / pin up board. Work top shall be made of 25 mm thick edge banded prelaminated particle board top supported with aluminum cantilevers.</p>	

Features:	
<ul style="list-style-type: none"> • Slots for supporting bracket • Levelers for individual frames • Flexibility for fixing add on frames • 2 Dimensional cable management • Dual raceway for data & power 	
Connectors	
The connectors shall be available for different configurations i.e. 2way, 3way, and 4 ways. Work stations should provide enough space at the connectors for routing and turning of cables. All the connector caps shall be Pressure die casted Aluminum Alloy with powder coated. Panel jointers shall be fabricated MS component which shall be nut bolted to the frame for the extra rigidity.	
Panels / Tiles	
System shall be externally fitted with 9 mm tiles / panels. The partition shall have two types of panels / tiles configuring pre-laminated board below the table top and fabric board (or) tiles with fabric / laminated / glass finish above the table top (or) the fabric panel / tiles should have provision of magnetic (or) pin up board. Panels / tiles shall be fixed to the frame using a unique arrangement of hook on clips at bottom and snap fit clip on the top of the frame. This arrangement shall have a dual advantage (i) Faster installation (ii) Proper alignment of tiles. All laminated tiles shall be lipped with 0.45 mm thick PVC edge board.	
Trims	
The segmental profile at the end trim of the frames shall provide the required finish and aesthetics for the work station. The trims shall be extruded aluminum sections with powder coated. The top trim shall be snap fitted to the frame for faster installation.	
Trim Features	
<ul style="list-style-type: none"> • Extruded aluminum trims. • Extruded trims shall be engineered for rigidity and functionality. • Various end caps compatible at the ends. • Pre-cut sizes for easy installation. • Trims as well as end caps shall be in powder coated finish. 	
External Cladding	
System shall be externally fitted with 9 mm tiles for easy accessibility to the cables and replacing whenever required. Cladding tiles shall be in various materials like magnetic fabric, laminated particle board, marker board, pinup fabric board etc and type and combinations of boards will be finalized after placement of order for supply. Cladding tiles shall be fixed to the frame using a unique arrangement of clip on clips at the bottom and snap fit clip on the top of the tile. This arrangement shall have a dual advantage (i) Faster installation (ii) Proper alignment of tiles. All laminated tiles shall be lipped with thick PVC edge board.	
Support System	
Work station should have standard support systems like cantilever, bracket, left / right brackets , stabilizer brackets and panel brackets to sustain work top and other loads.	
Worktop	
Worktop should be rectangular / curvilinear work top, made of 25mm thick both side pre laminated particle board with 1.5mm thick PVC edge banding. The worktop should be attached to partition's members with table top brackets/ cantilever brackets for better load transmission and support. The type of work top and laminate shade should be approved by the BHEL.	
Side Panel	
The Side Panel should be made of 18mm thick pre laminated board/MDF board with 1.5mm thick PVC edge banding. The laminate shade should be approved by the BHEL. The side panel should be attached with worktop with proper joineries.	
Keyboard Tray	
Keyboard Tray will made in 18mm thick PLB with palm rest panel. Tray should be mounted on telescopic sliders.	
CPU Trolley	
CPU trolley should be made with Mild Steel with twin wheel castors powder coated.	
Raceways & Cable Management	
The raceway channel shall be same material as that of frame members with same powder coating and wall thickness of 1.50 mm. The raceway shall be provided at the skirting level and above the table top and the same should be 100 mm wide (together of data and power cable separate raceways) with cross sectional thickness of minimum 50 mm thick for running data, telephone and electrical cable. The raceway above the table top shall be operable without affecting the work top.	
Raceway system should be pivotal raceway system for full access to the frame during installation and for easy routing of cables. Ample space shall be available for planning cable layout within the frame. Cable can be routed from floor / wall, whichever is possible to the partitions. There shall be separate raceway provision for data and power. Cable hangers shall be provided for neatness in the cable management.	

15	VERTICAL STORAGE WITH SLIDING DOOR UNIT (SMALL):-
	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) 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 conforming to IS 513 Gr. D thickness 1.00 mm (minimum) – height wise adjustable shelf mounting. Uniformly distributor load carrying capacity of 70 kg maximum for each self. One number of adjustable shelf 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 surfaces are to be treated for antirust.	

16	<p>Specification for 16 Seater Modular Conference Table</p> <p>Material Code : CG3900001707</p> <p>Main Table tops : Main table tops made of high density MDF board thickness 37.6 mm (18 mm + 18 mm + 0.6 mm DL + 0.4 mm membrane). 14 seater table shall consist the following size of table tops. <u>Wire Management system should be provided.</u></p> <p>Half round table tops 2 seater – Radius – 713 mm – 2 nos.</p> <p>Two Seater (Rectangular Shape) – 1350 mm (L) x 600 mm (W) – 6 Nos.</p> <p>Edge profile : - Water fall edge profile 10 mm radius on top edge and 5mm at bottom.</p> <p>Top Skin : - PVC Membrane foil (0.4 mm thick) clad on the MDF board using PV glue for better adhesion. This foil is pre-coated with layer of polyurethane for better scratch resistance and PVC membrane shall be terminated up to 6” of depth underneath (bottom) of the table top.</p> <p>Colour : As required</p> <p>Under Structure :</p> <p>Legs: Made from pre-laminated twin boards of 18 mm thick.</p> <p>Wire Carrier : Made from 0.6 mm thick CRCA painted.</p> <p>Carrier cover : Made of 12 mm thick MDF over all painted board.</p> <p>Table Design : As enclosed.</p> <p>Overall table size : 5400 mm (L) x 1400 mm (W) x 750 mm (H).</p>	
17	<p>Specification of Two Seater modular Work Station for Clerical / LWC(Ladies Welfare Centre) Staff</p> <p>Material Code : HY7802161983</p> <ul style="list-style-type: none"> The Modular Workstation Partition system shall be combination of panel and tile based system. The Modular Workstation Partitions shall be professional and shall have a thickness of 50 mm (Tolerance - ± 5 mm). Size: End to end – 2500 mm (L) x 650 mm (W) x 1350 mm (H) Tolerance (±5 mm). <p>Main Classification</p> <ul style="list-style-type: none"> Main Frame Structure Connectors Panels / Tiles Trims External Cladding Support Systems Raceways & Cable management <p>Frame Structure</p> <p>The frame of the modular partition systems should have strength to bear all loads. Frame shall be made up with aluminum extruded sections and engineered for strength, flexibility, cable management and support. The structure shall have verticals at the extreme ends for making further combination of frames and horizontal members at different levels like one at the work surface for fixing work top, then one at some height above the top for fixing accessories like book / paper / telephone holder. All the members of the frame shall be metal powder coated with thickness of at least 45 – 50 microns. There should be provision of raceway channel at the skirting level and above the table top level as double raceway cable management system to accommodate data and electrical cable at two different levels. The horizontal members shall have grooves for accessories attachment. All the members of the frame shall have thickness of 1.50 mm. All the members shall be on snap fitting. Workstation frames shall have with floor level adjuster upto 25 mm height. Connectors should have 2-way / 3-way / 4-way with end caps and bushes made of aluminum partition top rails and ports made of curved aluminum profile. In fill of partitions frame shall be made of selected combination of fabric / laminate / glass / magnetic white board / pin up board. Work top shall be made of 25 mm thick edge banded prelaminated particle board top supported with aluminum cantilevers.</p> <p>Features:</p> <ul style="list-style-type: none"> Slots for supporting bracket Levelers for individual frames Flexibility for fixing add on frames 2 Dimensional cable management Dual raceway for data & power <p>Connectors</p> <p>The connectors shall be available for different configurations i.e. 2way, 3way, and 4 ways. Work stations should provide enough space at the connectors for routing and turning of cables. All the connector caps shall be Pressure die casted Aluminum Alloy with powder coated. Panel jointers shall be fabricated MS component which shall be nut bolted to the frame for the extra rigidity.</p> <p>Panels / Tiles</p> <p>System shall be externally fitted with 9 mm tiles / panels. The partition shall have two types of panels / tiles configuring pre-laminated board below the table top and fabric board (or) tiles with fabric / laminated / glass finish above the table top (or) the fabric panel / tiles should have provision of magnetic (or) pin up board. Panels / tiles shall be fixed to the frame using a unique arrangement of hook on clips at bottom and snap fit clip on the top of the frame. This arrangement shall have a dual advantage (i) Faster installation (ii) Proper alignment of tiles. All laminated tiles shall be lipped with 0.45 mm thick PVC edge board.</p> <p>Trims</p> <p>The segmental profile at the end trim of the frames shall provide the required finish and aesthetics for the work station. The trims shall be extruded aluminum sections with powder coated. The top trim shall be snap fitted to the frame for faster installation.</p> <p>Trim Features</p> <ul style="list-style-type: none"> Extruded aluminum trims. Extruded trims shall be engineered for rigidity and functionality. Various end caps compatible at the ends. Pre-cut sizes for easy installation. Trims as well as end caps shall be in powder coated finish. 	

External Cladding
System shall be externally fitted with 9 mm tiles for easy accessibility to the cables and replacing whenever required. Cladding tiles shall be in various materials like magnetic fabric, laminated particle board, marker board, pinup fabric board etc and type and combinations of boards will be finalized after placement of order for supply. Cladding tiles shall be fixed to the frame using a unique arrangement of clip on clips at the bottom and snap fit clip on the top of the tile. This arrangement shall have a dual advantage (i) Faster installation (ii) Proper alignment of tiles. All laminated tiles shall be <u>ligned with thick PVC edge board.</u>
Support System
Work station should have standard support systems like cantilever, bracket, left / right brackets , stabilizer brackets and panel brackets to sustain work top and other loads.
Worktop
Worktop should be rectangular / curvilinear work top, made of 20mm thick both side pre laminated particle board with 1.5mm thick PVC edge banding. The worktop should be attached to partition's members with table top brackets/ cantilever brackets for better load transmission and support. The type of work top and laminate shade should be approved by the BHEL. The table top shall be at the height of 750mm from the ground level.
Keyboard Tray
Keyboard Tray will made in 18mm thick PLB with palm rest panel. Tray should be mounted on telescopic sliders.
CPU Trolley
CPU trolley should be made with Mild Steel with twin wheel castors powder coated.
Raceways & Cable Management
The raceway channel shall be same material as that of frame members with same powder coating and wall thickness of 1.50 mm. The raceway shall be provided at the skirting level and above the table top and the same should be 100 mm wide (together of data and power cable separate raceways) with cross sectional thickness of minimum 50 mm thick for running data, telephone and electrical cable. The raceway above the table top shall be operable without affecting the work top.
Raceway system should be pivotal raceway system for full access to the frame during installation and for easy routing of cables. Ample space shall be available for planning cable layout within the frame. Cable can be routed from floor / wall, whichever is possible to the partitions. There shall be separate raceway provision for data and power. Cable hangers shall be provided for neatness in the cable management.

18	Specification for Low back cushioned revolving chair / clerical
	Material Code : HY7802161380
	1) Seat / Back Assembly :
	The seat and back shall be made up of 1.2 cm thick hot pressed plywood, upholstered with fabric and moulded Polyurethane foam with PVC lipping all around. The back foam shall be designed with countered lumber support for extra comfort.
	Seat Height = 44 ± 1 cm – 56 ± 1 cm. Width of Chair = 73 ± 2 cm
	Height of Chair = 80 ± 1 cm – 92 ± 1 cm, Depth of Chair = 73 ± 2 cm
	Back Size: 490 ± 10 mm X 480 ± 10 mm
	Seat Size: 440 ± 10 mm X 480 ± 10 mm
	2) Polyurethane Foam :
	The Polyurethane foam shall be moulded with density = 45 +/- 2 kg/m and Hardness = 20 +/- 2 on Hampden machine at 25% compression.
	3) Armrests :
	The armrest tops shall be injection moulded from black Polypropylene. They shall be fitted to tubular armrest supports made of Dia 2.54 cm (1") x 14 BG M.S.E.R.W. tube and black powder coated. The tubular armrest supports shall hold together the seat and back.
	4) Centre Pivot Mechanisms :
	The center pivot mechanisms shall be designed with the following features:
	360 ⁰ revolving type.
	17 ⁰ maximum tilt on pivot at center.
	Tilt tension adjustment.
	Upright locking.
	5) Pneumatic Height Adjustment :
	The Pneumatic height adjustment shall be an adjustment stroke of 9.0 cm.
	6) Telescopic Bellow Assembly :
	The bellow shall be 3 piece telescopic type and injection moulded in black Polypropylene.
	7) Pedestal Assembly :
	The pedestal shall be fabricated from 0.2 cm thick CR steel, powder coated and fitted with an injection moulded black Polypropylene hub cap and 5 nos. twin wheel castors. (castor wheel dia 5.0 cm) The pedestal shall be 60.0 cm pitch center dia. (70.0 cm with castors).
	8) Twin wheel Castors :
	The twin wheel castors shall be injection moulded in Black Nylon.

19	Specification for Mod. Alu. Fr. – 1 Seater Workstation
	Material Code : HY7802161991
	<ul style="list-style-type: none"> The Modular Workstation Partition system shall be combination of panel and tile based system. The Modular Workstation Partition shall be professional, robust and shall have a thickness of 65 mm (Tolerance - ± 5 mm). Size: End to end – 1500 mm (L) x 1500 mm (W) x 1350mm (H)
	Main Classification
	<ul style="list-style-type: none"> Main Frame Structure Connectors Panels / Tiles Trims External Cladding Support Systems Raceways & Cable management

Frame Structure

The frame of the modular partition systems should have strength to bear all loads. Frame shall be made up with aluminum extruded sections and engineered for strength, flexibility, cable management and support. The structure shall have verticals at the extreme ends for making further combination of frames and horizontal members at different levels like one at the work surface for fixing work top, then one at some height above the top for fixing accessories like book / paper / telephone holder. All the members of the frame shall be metal powder coated with thickness of at least 45 – 50 microns. There should be provision of raceway channel at the skirting level and above the table top level as double raceway cable management system to accommodate data and electrical cable at two different levels. The horizontal members shall have grooves for accessories attachment. All the members of the frame shall have thickness of 1.50 mm. All the members shall be on snap fitting. Workstation frames shall have with floor level adjuster upto 25 mm height. Connectors should have 2-way / 3-way / 4-way with end caps and bushes made of aluminum, partition top rails and ports made of curved aluminum profile. In fill of partitions frame shall be made of selected fabric / laminate / glass / magnetic white board / pin up board. Work top shall be made of 25 mm thick edge banded prelaminated particle board top supported with aluminum cantilevers.

Features:

- Slots for supporting bracket
- Levelers for individual frames
- Flexibility for fixing add on frames
- 2 Dimensional cable management
- Dual raceway for data & power

Connectors

The connectors shall be available for different configurations i.e. 2way, 3way, and 4 ways. Work stations should provide enough space at the connectors for routing and turning of cables. All the connector caps shall be Pressure die casted Aluminum Alloy with powder coated. Panel jointers shall be fabricated MS component which shall be nut bolted to the frame for the extra rigidity.

Panels / Tiles

System shall be externally fitted with 9 mm tiles / panels. The partition shall have two types of panels / tiles configuring pre-laminated board below the table top and fabric board (or) tiles with fabric / laminated / glass finish above the table top (or) the fabric panel / tiles should have provision of magnetic (or) pin up board. Panels / tiles shall be fixed to the frame using a unique arrangement of hook on clips at bottom and snap fit clip on the top of the frame. This arrangement shall have a dual advantage (i) Faster installation (ii) Proper alignment of tiles. All laminated tiles shall be lipped with 0.45 mm thick PVC edge board.

Trims

The segmental profile at the end trim of the frames shall provide the required finish and aesthetics for the work station. The trims shall be extruded aluminum sections with powder coated. The top trim shall be snap fitted to the frame for faster installation.

Trim Features

- Extruded aluminum trims.
- Extruded trims shall be engineered for rigidity and functionality.
- Various end caps compatible at the ends.
- Pre-cut sizes for easy installation.
- Trims as well as end caps shall be in powder coated finish.

External Cladding

System shall be externally fitted with 9 mm tiles for easy accessibility to the cables and replacing whenever required. Cladding tiles shall be in various materials like magnetic fabric, laminated particle board, marker board, pinup fabric board etc and type and combinations of boards will be finalized after placement of order for supply. Cladding tiles shall be fixed to the frame using a unique arrangement of clip on clips at the bottom and snap fit clip on the top of the tile. This arrangement shall have a dual advantage (i) Faster installation (ii) Proper alignment of tiles. All laminated tiles shall be lipped with thick PVC edge board.

Support System

Work station should have standard support systems like cantilever, bracket, left / right brackets, stabilizer brackets and panel brackets to sustain work top and other loads.

Worktop

Worktop should be rectangular / curvilinear work top, made of 25mm thick both side pre laminated particle board with 1.5mm thick PVC edge banding. The worktop should be attached to partition's members with table top brackets/ cantilever brackets for better load transmission and support. The type of work top and laminate shade should be approved by the BHEL.

Side Panel

The Side Panel should be made of 18mm thick pre laminated board/MDF board with 1.5mm thick PVC edge banding. The laminate shade should be approved by the BHEL. The side panel should be attached with worktop with proper joineries.

Keyboard Tray

Keyboard Tray will made in 18mm thick PLB with palm rest panel. Tray should be mounted on telescopic sliders.

CPU Trolley

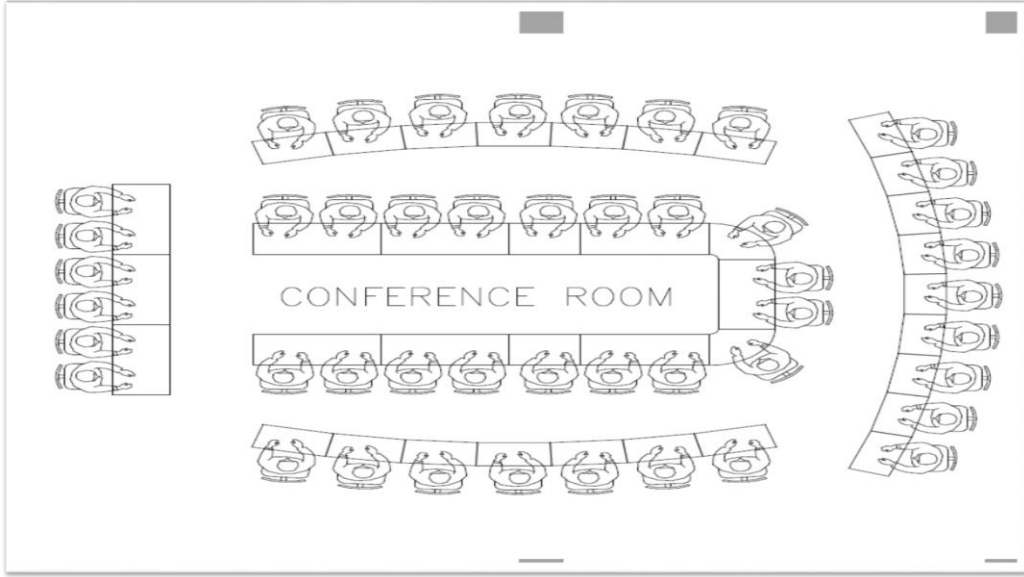
CPU trolley should be made with Mild Steel with twin wheel castors powder coated.

Raceways & Cable Management

The raceway channel shall be same material as that of frame members with same powder coating and wall thickness of 1.50 mm. The raceway shall be provided at the skirting level and above the table top and the same should be 100 mm wide (together of data and power cable separate raceways) with cross sectional thickness of minimum 50 mm thick for running data, telephone and electrical cable. The raceway above the table top shall be operable without affecting the work top.

Raceway system should be pivotal raceway system for full access to the frame during installation and for easy routing of cables. Ample space shall be available for planning cable layout within the frame. Cable can be routed from floor / wall, whichever is possible to the partitions. There shall be separate raceway provision for data and power. Cable hangers shall be provided for neatness in the cable management.

20	<p>Specification for Mod. Alu. Fr. – 2 Seater Workstation</p> <p>Material Code : HY7802161894</p> <ul style="list-style-type: none"> The Modular Workstation Partition system shall be combination of panel and tile based system. The Modular Workstation Partition shall be professional, robust and shall have a thickness of 65 mm (Tolerance - ± 5 mm). Size: End to end – 3000 mm (L) x 1500 mm (W) x 1350 mm (H) <p>Main Classification</p> <ul style="list-style-type: none"> Main Frame Structure Connectors Panels / Tiles Trims External Cladding Support Systems Raceways & Cable management <p>Frame Structure</p> <p>The frame of the modular partition systems should have strength to bear all loads. Frame shall be made up with aluminum extruded sections and engineered for strength, flexibility, cable management and support. The structure shall have verticals at the extreme ends for making further combination of frames and horizontal members at different levels like one at the work surface for fixing work top, then one at some height above the top for fixing accessories like book / paper / telephone holder. All the members of the frame shall be metal powder coated with thickness of at least 45 – 50 microns. There should be provision of raceway channel at the skirting level and above the table top level as double raceway cable management system to accommodate data and electrical cable at two different levels. The horizontal members shall have grooves for accessories attachment. All the members of the frame shall have thickness of 1.50 mm. All the members shall be on snap fitting. Workstation frames shall have with floor level adjuster upto 25 mm height. Connectors should have 2-way / 3-way / 4-way with end caps and bushes made of aluminum, partition top rails and ports made of curved aluminum profile. In fill of partitions frame shall be made of selected fabric / laminate / glass / magnetic white board / pin up board. Work top shall be made of 25 mm thick edge banded prelaminated particle board top supported with aluminum cantilevers.</p> <p>Features:</p> <ul style="list-style-type: none"> Slots for supporting bracket Levelers for individual frames Flexibility for fixing add on frames 2 Dimensional cable management Dual raceway for data & power <p>Connectors</p> <p>The connectors shall be available for different configurations i.e. 2way, 3way, and 4 ways. Work stations should provide enough space at the connectors for routing and turning of cables. All the connector caps shall be Pressure die casted Aluminum Alloy with powder coated. Panel jointers shall be fabricated MS component which shall be nut bolted to the frame for the extra rigidity.</p> <p>Panels / Tiles</p> <p>System shall be externally fitted with 9 mm tiles / panels. The partition shall have two types of panels / tiles configuring pre-laminated board below the table top and fabric board (or) tiles with fabric / laminated / glass finish above the table top (or) the fabric panel / tiles should have provision of magnetic (or) pin up board. Panels / tiles shall be fixed to the frame using a unique arrangement of hook on clips at bottom and snap fit clip on the top of the frame. This arrangement shall have a dual advantage (i) Faster installation (ii) Proper alignment of tiles. All laminated tiles shall be lipped with 0.45 mm thick PVC edge board.</p> <p>Trims</p> <p>The segmental profile at the end trim of the frames shall provide the required finish and aesthetics for the work station. The trims shall be extruded aluminum sections with powder coated. The top trim shall be snap fitted to the frame for faster installation.</p> <p>Trim Features</p> <ul style="list-style-type: none"> Extruded aluminum trims. Extruded trims shall be engineered for rigidity and functionality. Various end caps compatible at the ends. Pre-cut sizes for easy installation. Trims as well as end caps shall be in powder coated finish. <p>External Cladding</p> <p>System shall be externally fitted with 9 mm tiles for easy accessibility to the cables and replacing whenever required. Cladding tiles shall be in various materials like magnetic fabric, laminated particle board, marker board, pinup fabric board etc and type and combinations of boards will be finalized after placement of order for supply. Cladding tiles shall be fixed to the frame using a unique arrangement of clip on clips at the bottom and snap fit clip on the top of the tile. This arrangement shall have a dual advantage (i) Faster installation (ii) Proper alignment of tiles. All laminated tiles shall be lipped with thick PVC edge board.</p> <p>Support System</p> <p>Work station should have standard support systems like cantilever, bracket, left / right brackets , stabilizer brackets and panel brackets to sustain work top and other loads.</p> <p>Worktop</p> <p>Worktop should be rectangular / curvilinear work top, made of 25mm thick both side pre laminated particle board with 1.5mm thick PVC edge banding. The worktop should be attached to partition's members with table top brackets/ cantilever brackets for better load transmission and support. The type of work top and laminate shade should be approved by the BHEL.</p> <p>Side Panel</p> <p>The Side Panel should be made of 18mm thick pre laminated board/MDF board with 1.5mm thick PVC edge banding. The laminate shade should be approved by the BHEL. The side panel should be attached with worktop with proper joineries.</p> <p>Keyboard Tray</p> <p>Keyboard Tray will made in 18mm thick PLB with palm rest panel. Tray should be mounted on telescopic sliders.</p> <p>CPU Trolley</p> <p>CPU trolley should be made with Mild Steel with twin wheel castors powder coated.</p> <p>Raceways & Cable Management</p> <p>The raceway channel shall be same material as that of frame members with same powder coating and wall thickness of 1.50 mm. The raceway shall be provided at the skirting level and above the table top and the same should be 100 mm wide (together of data and power cable separate raceways) with cross sectional thickness of minimum 50 mm thick for running data, telephone and electrical cable. The raceway above the table top shall be operable without affecting the work top.</p> <p>Raceway system should be pivotal raceway system for full access to the frame during installation and for easy routing of cables. Ample space shall be available for planning cable layout within the frame. Cable can be routed from floor / wall, whichever is possible to the partitions. There shall be separate raceway provision for data and power. Cable hangers shall be provided for neatness in the cable management.</p>
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21	Specification for Conference Hall Table (47 Seater)	
Material Code : CG3900001766		
Conference hall furniture consists of one 47 seater modular conference table along with Wire Management System.		
Main Table tops: Main table tops made of high density MDF board thickness 37 mm (18 mm + 18 mm + 0.6 mm DL + 0.4 mm membrane). 47 seater table shall consist the following size of table tops.		
Single seater -Quarter round table tops - Radius - 700 mm - 2 nos.		
Two Seater (Rectangular Shape) - 1350 mm (L) x 600 mm (W) - 10 Nos.		
Rectangular Seater (Rectangular Shape) - 760 mm (L) x 600 mm (W) - 2 Nos.		
Single Seater (Rectangular Shape) - 800 mm (L) x 450 mm (W) - 23 Nos.		
Edge profile: - Water fall edge profile 10 mm radius on top edge and 5mm at bottom.		
Table Design: As shown below.		
		
Top Skin: - PVC Membrane foil (0.4 mm thick) clad on the MDF board using PV glue for better adhesion. This foil is pre-coated with layer of polyurethane for better scratch resistance and PVC membrane shall be terminated up to 6" of depth underneath (bottom) of the table top.		
Colour : As required		
Under Structure :		
Legs: Made from pre-laminated twin boards of 18 mm thick.		
Wire Carrier: Made from 0.6 mm thick CRCA painted.		
Carrier cover: Made of 12 mm thick MDF over all painted board.		