



Running Contract Details	
Equipment Name	Modular Furniture
Running Contract Valid Till	02-08-2025
Tender Ref No	KMSCL/EP/T452/1120/2022
Tendered Quantity	1
Supplier Name	M/s Art Lab Equipments
GST No	36AVFPS8122D1ZL
Installation & Delivery Period	15 Week(s)
Up-time / PM vist	95% & 4 Visits per year
Warranty period	3 Years

Supplier`s Details		
Address	Contact Details	
Plot No. 5L- Phase V -IDA Jeedimetla Hyderabad Telangana 500055	Contact Person	Lekha
	Phone	04040063678,040 27165411
	Mobile No	08048653856
	Email	artlabsindia@gmail.com,riju.artlab@gmail.com

Item-wise Price Details				
#	Item Details	Unit Rate (Incl.all taxes & charges)	Service Charges (Through KMSCL)	Grand Total
1	Modular Furniture	0 Incl.GST :0%	0	0
2	Pre Coated MS tubular sections, C Frames/Ã-Â¿Ã½JÃ-Â¿Ã½ Frames/H Frames, with 40 x 60, 16 Gauge OR 30 x 60 14 Gauge	265.5 Incl.GST :18%	18.59	284.09
3	18mm Thick high quality jet black or absolute black granite	5015 Incl.GST :18%	351.05	5366.05
4	16mm Pheonlic Resin TRESPA Brand	14455 Incl.GST :18%	1011.85	15466.85
5	Modular Fume Hood as per spec	206500 Incl.GST :18%	14455	220955
6	Under Bench Storage units as sper spec 450mmLx550mmD; 1 door, 1 drawer	11800 Incl.GST :18%	826	12626

Item-wise Price Details				
7	Under Bench Storage units as per spec 600mmLx550mmD; 1 door, 1 drawer	12980 Incl.GST :18%	908.6	13888.6
8	Under Bench Storage units as per spec 750mmLx550mmD, 2 door, 1 drawer	14160 Incl.GST :18%	991.2	15151.2
9	Under Bench Storage units as per spec 900mmLx550mmD, 2 door, 2 drawer	18290 Incl.GST :18%	1280.3	19570.3
10	Reagent shelf two tier, 300mm - quote rate for one meter	5310 Incl.GST :18%	371.7	5681.7
11	Reagent shelf two tier, 150mm - quote rate for one meter	4130 Incl.GST :18%	289.1	4419.1
12	Reagent shelf single tier, 150mm - quote rate for one meter	2655 Incl.GST :18%	185.85	2840.85
13	Service box in reagent shelf	708 Incl.GST :18%	49.56	757.56
14	Cover / filler / Back panel - quote rate for one meter	885 Incl.GST :18%	61.95	946.95
15	Wall storage cupboard 900mm (W) X 300mm (D) x 600mm(H)	11800 Incl.GST :18%	826	12626
16	Wall storage cupboard 600mm (W) X 300mm (D) x 600mm(H)	10030 Incl.GST :18%	702.1	10732.1
17	Service Dropper - quote rate for one meter	1475 Incl.GST :18%	103.25	1578.25
18	Triangular Metal Electrical raceway - quote rate for one meter	1475 Incl.GST :18%	103.25	1578.25
19	Sink	5664 Incl.GST :18%	396.48	6060.48
20	Eye wash	14160 Incl.GST :18%	991.2	15151.2
21	Laboratory Reagent Storage Full Height Storage Cabinets	35990 Incl.GST :18%	2519.3	38509.3
22	Fumehood ducting - quote rate for one meter	4602 Incl.GST :18%	322.14	4924.14
23	Water tap one way	7670 Incl.GST :18%	536.9	8206.9

Item-wise Price Details				
24	Three way water tap	11516.8 Incl.GST :18%	806.18	12322.98
25	Hand held eye wash	14750 Incl.GST :18%	1032.5	15782.5
26	PP Transparent Back Slash Guard	2655 Incl.GST :18%	185.85	2840.85
27	Peg Board PP with Collection tray of 18 pegs	11210 Incl.GST :18%	784.7	11994.7
28	PU seated laboratory stool with back rest	7670 Incl.GST :18%	536.9	8206.9
29	PU seated laboratory stool without back rest	5310 Incl.GST :18%	371.7	5681.7
30	Floor mounted emergency shower with eye wash station (safety station)	112100 Incl.GST :18%	7847	119947
31	Under Bench Storage units as sper spec 450mmLx550mmD; 1 door, 1 drawer - Plinth Type	15340 Incl.GST :18%	1073.8	16413.8
32	Under Bench Storage units as sper spec 750mmLx550mmD, 2 door, 1 drawer - Plinth Type	16520 Incl.GST :18%	1156.4	17676.4
33	Under Bench Storage units as sper spec 900mmLx550mmD, 2 door, 2 drawer - Plinth Type	20060 Incl.GST :18%	1404.2	21464.2
34	Leg space assembly with back panel - quote rate for one meter	2950 Incl.GST :18%	206.5	3156.5
35	Vibration free table	33630 Incl.GST :18%	2354.1	35984.1
36	Spot extractor	35400 Incl.GST :18%	2478	37878
37	Corner Table with storage	17700 Incl.GST :18%	1239	18939
38	Slotted angle rack	14750 Incl.GST :18%	1032.5	15782.5
39	Providing and fixing LPG pipe: MS pipe 15mm, 1.5mm wall thick-Sub branches	1416 Incl.GST :18%	99.12	1515.12
40	"Providing and fixing Vacuum pipe : MS pipe 28mm, 1.5mm wall thick-Header Line"	1416 Incl.GST :18%	99.12	1515.12
41	"1 LPG system, 4 manifold with NRV, pressure and release regulator 4 each & high pressure tail pipes "	17700 Incl.GST :18%	1239	18939

Item-wise Price Details				
42	Brass 4 way valve with outlets	17700 Incl.GST :18%	1239	18939
43	Isolation valves	531 Incl.GST :18%	37.17	568.17
44	Bunsen Burner	531 Incl.GST :18%	37.17	568.17
45	"Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper Conductor,single core cable in surface/recessed medium class PVC conduit as required.2x1.5 sq.mm + 1x1.5 sq.mm earth wire"	88.5 Incl.GST :18%	6.2	94.7
46	"Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper Conductor,single core cable in surface/recessed medium class PVC conduit as required.2x2.5 mm+1x2.5 mm earth wire."	138.06 Incl.GST :18%	9.66	147.72
47	"Wiring for circuit/submain wiring along with earth wire with the following sizes of FRLS PVC insulated copper conducted,single core cable in surface/recessed medium class PVC conduit as required.2x4sq mm+1x4 sq mm earth wire "	206.5 Incl.GST :18%	14.46	220.96
48	"Supplying and drawing following sizes of FRLS PVC insulated copper conductor,single core cable in the existing surface / recessed steel/ PVC conduit as required. 3 X 1.5 sq.mm"	118 Incl.GST :18%	8.26	126.26
49	Supplying and drawing following sizes of FRLS PVC insulated copper conductor,single core cable in the existing surface/recessed steel/pvc conduit as required.3x2.5 sq.mm	188.8 Incl.GST :18%	13.22	202.02
50	"Supplying and drawing following sizes of FRLS PVC insulated copper conductor,single core cable in the existing surface / recessed steel/ PVC conduit as required. 3 X 4 sq.mm"	291.46 Incl.GST :18%	20.4	311.86
51	supplying and drawing following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall & making good the same in case of recessed conduit as required 20 mm	106.2 Incl.GST :18%	7.43	113.63
52	Supplying and fixing of following sizes of mediumclass PVC conduit along with accessories in surface recess including cutting the wall and making good the same in case of recessed conduit as required. 25 mm	141.6 Incl.GST :18%	9.91	151.51

Item-wise Price Details				
53	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. As required. 5/6 amps switch	156.94 Incl.GST :18%	10.99	167.93
54	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc.as required. 3 pin 5/6 amp socket outlet.	454.3 Incl.GST :18%	31.8	486.1
55	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc.as required 15/16 amp switch.	277.3 Incl.GST :18%	19.41	296.71
56	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc.as required 6 pin 5/15 amp socket outlet.	442.5 Incl.GST :18%	30.98	473.48
57	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc as required.1 or 2 module.	177 Incl.GST :18%	12.39	189.39
58	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc as required 3 module.	212.4 Incl.GST :18%	14.87	227.27
59	Supplying and fixing following Modular base & cover plate on existing modular metal boxes etc as required 6 module.	377.6 Incl.GST :18%	26.43	404.03
60	Supply and installation of sheet steel, phosphatised and painted, dust and vermin proof enclosure of MCBDB including copper /brass bus bar, neutral link, earth bus and DIN rail suitable for fixing MCB/ isolator etc. fixed on wall using suitable anchor bolts or fixed in recess including cutting hole on the wall, making good the damages, colour washing etc. as required 6 way (8+18) - three phase double cover (IP 42/43)	8146.72 Incl.GST :18%	570.27	8716.99
61	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. As required. 40 amps	1762.92 Incl.GST :18%	123.4	1886.32

Item-wise Price Details				
62	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required 63 amps	1944.64 Incl.GST :18%	136.12	2080.76
63	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required. 40 amps	6374.36 Incl.GST :18%	446.21	6820.57
64	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required. 63 amps	7259.36 Incl.GST :18%	508.16	7767.52
65	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, ""C"" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. Single pole	151.04 Incl.GST :18%	10.57	161.61
66	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer - in-Charge. Internal work - Exposed on wall 20 mm nominal outer dia pipes	590 Incl.GST :18%	41.3	631.3
67	Providing and fixing PVC pipes including jointing of pipes with one step PVC solvent cement, trenching refilling & testing of joints complete as per direction of Engineer in Charge 40 mm dia 10Kgf/cm2	354 Incl.GST :18%	24.78	378.78
68	Providing and fixing P.V.C. waste pipe for sink or wash basin including PVC. waste fittings complete.Semi rigid pipe32 mm dia	708 Incl.GST :18%	49.56	757.56
69	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931 15mm nominal Bore.	649 Incl.GST :18%	45.43	694.43

Item-wise Price Details							
70	Providing and fixing uplasticised PVC connection pipe with brass unions: 30 cm length 15 mm nominal bore	177 Incl.GST :18%	12.39	189.39			
71	Rectangular Metal Electrical raceway - quote rate for one meter	1475 Incl.GST :18%	103.25	1578.25			
72	Brass 1 way valve with outlets	12980 Incl.GST :18%	908.6	13888.6			
73	Using 50mm x 50mm Trunking duct for wall (CMS)	908.6 Incl.GST :18%	63.6	972.2			
74	Using 50mm x 50mm Ceiling duct	1121 Incl.GST :18%	78.47	1199.47			
		798854.1	55919.79	854773.89			
Annual / Comprehensive Maintenance Charges (Exl.Tax)							
Rate	4 th Year	5 th Year	6 th Year	7 th Year	8 th Year	9 th Year	10 th Year
Modular Furniture							
Labour	6,00,000.00	6,00,000.00	7,50,000.00	7,50,000.00	7,50,000.00	7,50,000.00	7,50,000.00
Comprehensive	15,00,000.00	15,00,000.00	18,00,000.00	18,00,000.00	18,00,000.00	18,00,000.00	18,00,000.00

Other terms & conditions

1. The supplier shall execute an agreement with the purchaser as per tender conditions (agreement format is given in the tender document).
2. The supplier shall submit performance security amounting to 5.00% of the value of the supply order.
3. The labour & comprehensive charges of equipment after the completion of warranty period is finalized by KMSCL as mentioned above.
4. Since discount rate is not applicable for equipment under Running Contract of KMSCL, purchase/supply order can be issued directly to supplier at the given rate with tax & other charges (exclusive of KMSCL service charges).
5. If purchase/supply order is issued directly to the supplier, KMSCL service charge need not be paid. But the copy of the said order may be forwarded to KMSCL for information.

Technical Specification

Equipment :Modular Furniture

Equipment Name: Modular Furniture

Design Fabrication, Supply and Installation of Modular Laboratory Island/Linear Benches as specified in individual items, with necessary Frame Work, Bench Top, Reagent Shelves, under Bench Storages Units, Overhead Storages etc, as detailed herewith

General Specification

A. Frame Work:

Pre Coated MS tubular sections, 'C' Frames/'J' Frames/ "H" Frames, with 40mm x 60 mm -16 Gauge Or 30mm x 60mm- 14 Gauge as specified in individual items, for supporting the bench top. Tubular sections confirming to I.S. Code 7138:1973 (Indian Standard specification for steel tubes for furniture) and all sheet metal components should be of CRCA confirming to IS Code 513:1994. C frame fabricated out of heavy gauge hollow pipes size 60x40x2mm and 1.6 mm thick steel plates. The structure will be provided with necessary leveling bolts suitable for ± 5 mm level adjustment. Open ends of the pipe will be provided with elegant finish plastic caps. The structure shall be duly treated for the rust prevention and coated with epoxy powder coated (with minimum thickness of 60 micron). The horizontal frames connecting the C' Frames/'J' Frames/ "H" Frames and other required frames shall be of the same specifications.

B. Bench Top

18mm / 20 (\pm)2mm Thick high quality jet black or absolute black granite and 16mm Phenolic Resin TRESPA Brand. Orders will be issued based on site and end user requirement.

Minimum 18mm thick high quality Jet Black/Absolute Black Granite.

1. Jet Black / Absolute Black Granite with 'little to very little' grains on the surface.
2. Granite slabs shall have uniformity of colour, tone and textures. The entire supply for granite stone slab shall be procured from one location (in one quarry), and supplied preferably, in one lot to keep variations to the minimum.
3. It should be pre polished (mirror polished), all sharp edges half round molded. The exposed edges of the worktop should be chamfered and smoothened.
4. All edge molding shall be equal in all areas. It shall be free of any surface defect or any edge damage.
5. The granite stone procured for the work shall match the samples provided to the technical committee during the technical evaluation. Before starting the work, the tenderer shall procure and submit the samples of granite stone slab for the approval of respective authorities on demand.
6. Slabs with stains or patches either before or after installation, shall be rejected and shall be replaced by the Contractor at his own cost.

C. Under Bench Storage Units

Lab benches shall have under benches, constructed of Electro Galvanized Iron/ Zinc Phosphated CRCA MS, Skin passed (GPSP) Epoxy Polyester Powder Coated 60-80 Microns externally and internally. All the front door and drawer panels should be of Double wall sound deafening sandwiched type with Recess Handles - made of Chemical resistant, rust proof and sturdy Aluminium, Cabinet resting on adjustable Leveling Jacks with PP Base and with Cabinets sizes 600/750/900 mm in length 550 mm Deep as specified in individual item. Doors should be assembled with SS-304 hinge assembly. Drawer tray should be of single piece construction. Doors should be easily removable and hinges should be easily replaceable.

Dimensions: W=300/450/600/750/900 mm, D = 530mm, H = 635/485 mm. Configurations: 1 Shutter/ 2 Shutters + No Drawer /1 Drawer/2 Drawers/3 Drawers, Thickness: LH/RH side panels, shutter front, Bottom panel, Top front, Drawer separator, shelf, Alignment channel should be of 1.2mm thk. Removable Back panel, Shutter cover, Fr. Rack strip, Top cover panel should be of 0.8mm thk. Handle: Anodized Aluminum Recessed-Type, CTC: 160.0mm. Lock: Units have a locking facility with 180° and 10 lever cam lock mechanism (except for sink and corner unit). Hinge: Knuckle-butt type SS Hinge. Screw: SS304. Shutter should be of twin-type construction with sound dampening effect using profeel. Shutter cover should be equipped with Bump on for sound dampening. Ball Slide: 500mm Length (required only for drawer unit). Shutter should have provision of roller catch.

Storage Units to be of the following types:

1. Suspended Type
2. Sliding Type
3. Castor-based Mobile Type (depending upon the requirement)

D. Reagent Shelves

Worktop mounted reagent rack in single or double tier design. Vertical member and main bracket of the reagent rack shall be in GI or Aluminium construction duly anodised and epoxy coated for excellent corrosion resistance. Rack platform shall be in wire reinforced glass construction. Shelf height shall be adjustable as per requirement. 150mm deep.

The profile ends shall be covered and protected with injection molded ABS end caps.

Vertical section should have groove for knock down assembly of service box and adjustable shelves.

Shelves shall be adjustable at any required height with friction technology without any holes.

The Fasteners on the Base shall be covered with caps made of ABS/CRCA MS for aesthetic and cleanliness.

Extruded aluminum/Similar material front and back runners shall be provided in order to prevent object falling from the shelves.

The entire metal parts shall be epoxy powder coated for aesthetics. The Shelves bracket shall be made of minimum 16 gauges thick.

Minimum 6mm thick wire glass to be provided on each shelf.

Service box: – Service box shall be made of electro galvanized steel sheet of thickness minimum 1 mm, Size: 92 mm x 95 mm.

All reagent shelves/racks/service box to be pre – treated with seven tank chemical process and powder coated with highly chemical resistant epoxy colour having dry film thickness of minimum 70 -80 microns.

E. Cover/ Filler/Back Panels

All Cover/ Filler/ Back Panels below Knee space made of GI epoxy powder coated/ Zinc Phosphated CRCA MS of thickness 1.0mm.

F. Service dropper/Upright

Supply and installation of vertical trunking of overall size 300 mm (W) X 150 mm (D), 2100 mm above the benchtop level (+900 mm from FFL) and up to the false ceiling which is at about 2100 mm from bench top with 3 separate compartments for mechanical piping (water lines, gas piping, electrical cables etc.)with lockable access to openable door on top and opening at the horizontal spine level for easy maintenance. The thickness shall be at least 1.2mm.

G.Triangular/Rectangular Metal Electrical Raceway

Metal – Triangular Shape /Vertical shape: Made of GI Sheets, PVC – Vertical Shape MK/ Legrand Makes. Electrical Fittings:- 230V, 5/15Amp make as specified. Electrical trunking shall also be provided beneath reagent shelf if required. Thickness : 1.00 mm

H.SINK

In one piece, moulded Sink in solid Epoxy, Polypropylene (PP) construction of dimension 500 x 400 x 300 MM (W D H) thickness 5mm. Sink outlet shall be provided with a large bottle trap in PP construction. Faucet should be 1-way type faucet of approved make.

I. Eye Wash

Eye washer shall be angled single/double headed type having proper grip for holding, and shall be placed near sink with suitable mount and making suitable connections to water mains

J. Hand held eye wash

1. Should have eye shower table mounted with two heads.
2. Should be made of brass with chemical resistant, polycoat and stainless steel bowl.
3. Should have water regulation with a built-in flow fix (26 litre /minute)

4. Should have minimum working pressure 1.5 bars.
5. Should have push down control.

K. Floor mounted emergency shower with eye wash station (safety station)

L. Laboratory Reagent Storage Full Height Storage Cabinets

Reagent Storage Cabinets- Fully height, constructed of Electro galvanized iron, skin passed (GPSP) Epoxy Polyester Powder Coated 60-80 Microns externally and internally with Two Doors Construction Opaque/Glass with Double wall sound deafening sandwiched type panels, 5 Numbers height adjustable shelves, Recess Handles- made of Chemical resistant, rust proof and sturdy Aluminium, Cabinet resisting on plinth adjustable Levelling jacks with PP Base and with Cabinets sizes 600 x 900 mm in length 550 mm Deep and 2000 mm as specified in individual item. Thickness 1.2mm.

M. Wall Storage cupboard

Wall mounted Storage Cabinets to be of complete modular design consisting of Cabinet Frame, metal shutters (one for 600mm/2 for 900mm), and Aluminium recess handles. Cabinet frame to be of 1 mm GI sheet, with horizontal stiffeners of 1.2mm thick. Metal Shutters are of 1mm thick GI sheet with profile insert to provide rigidity to the doors. Metal shutters and Metal frame with inserted glass. 1 Shelf is provided made from GI, shelf is adjustable to have a load carrying capacity of 25-30 kg Uniformly Distributed Load (UDL). Aluminium Recess Handles to provide extra corrosion resistance. Hinges to be Butt type hinges in SS 304 or 316. Complete Storage to be Flush design with no protruding handles for better safety of the users to be provided. The complete M.S. material of cabinet to be epoxy powder coated interior and exterior. The thickness of powder coat to be 60-70 microns as per specification, Each unit should have a locking facility with 180°, cam lock mechanism as per approved make.

Sizes : 600mm or 900 mm(W) X 300 mm (D) x 600 mm (H)

: 600 mm with one Door/900 mm with 2 Door

A. PU seated laboratory stool with back rest

	Lab Stool	Application: Ideal for all Laboratory seating		
1	Specific Details:			
2	5-Star chromed Heavy Duty steel Base		diameter:640 mm	
3	Fitted with height adjustable stainless steel foot ring			
4	Gas-lift for Seat Height adjusting			
5	Seating and Back Rest made of Soft PU Cushion/ similar material of Black colour			
6	On Heavy Duty PU Castor Wheels			
7	Can be washed clean			
8	Seat Height Should be adjustable			
9	Seat Width:		Minimum 350mm	
10	Seat Depth		Minimum 260mm	
11	PU Foam thickness:		Minimum 30mm	

O. PU seated laboratory stool with back rest : All specifications as per above without back rest

P. Service Fittings and Accessories

All Service fittings should be laboratory grade, and water faucets and valve bodies should be cast red brass alloy or bronze forgings, all fittings should be powder plated unless specified otherwise. Service Indexes: Fittings should be identified with service indexes in the

color coding as per DIN 12920.

Q. PEG BOARDS

These should be Single faced high grade stainless steel pegboard having a tray hole for water drainage and detachable pegs. The essence should be made up of 1 mm thick stainless steel (SS 304) whereas the pegs should be made up of polypropylene and should be adjustable with a minimum 10mm distance between each peg

R. Testing Standard/Certification

Fume Hood/S: Fume Hoods should be manufactured as Ashrae 110:1995 (American Society of Heating, Refrigerating and Air-Conditioning Engineers) Standard norms. On demand bidder must provide third party site testing

The bidder must have valid SEFA Executive member certificate. The Third party testing certificate for SEFA standard shall be produced along with the technical bid. The bidder should possess ISO 9001:2008 Certificate

S. Fume Hood

Over all Dimensions	1500L X 900W X 2400H in mm
Base Cabinet Dimension	1500L X 500W X 900H in mm
Material of construction	18 Gauge Electro Galvanised Sheet with Epoxy Polyester Powder Coating.
External finish	Epoxy polyester powder coated 60-70 micron
Internal finish	HPL 6mm thick TRESPA make
Door	Single, Vertical Sliding, Concealed Type Door, Balanced with Counter Weights, Sash weights and Wire rope etc.
Work top	Jet black Granite work top dished type with 18mm thick 200x100mm cup sink made of PP fixed on work top with draw-in line up to 1-2 metre length to nearest drawing point
Illumination	LED Light 200 Lux – 2nos
Powered by blower	1 HP 1380RPM TEFC 3 Ph ABB/ Crompton OR Equivalent make motor
Baffle	A stable, Non – Adjustable baffle with a single slopt on the back baffle to aid in disturbing the flow of air into and through the hood. The baffle shall be spaced out from the back liner and shall be removable for cleaning
Impeller	Dynamically balanced FRP Impeller
Baffled by	3 mm thick FRP sheet
Service Lines	The service lines for water, gas and nitrogen shall be connected with the lines provided by hospital authorities in the wall.
Power sockets	4 numbers of 15/5 amps 3 pin electrical socket cum switch

Ducting.

FRP Rigid ducting of suitable dia to be provided from the blower to the duct collar. The total ducting will include flanges, bend, brackets, exhaust stacks & necessary clamps.	Per meter rate shall be provided in BOQ.
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T. SPOT EXTRACTORS

Extractor arms mainly for use in chemical environments, where an extended resistance against chemical substances is a demand. All aluminium parts should have a double anodized surface protection

Arm sections – Thin walled anodized aluminium sections with a very good corrosion resistance.

Swivel – Swivel with 360 degree rotation. Add reduction for correct connection diameter.

Joints – The adjustment knobs on the friction joints should be supported by ball-bearings. The first joint should be supported by a spring (not Ø100-1200). 360 degree rotation where indicated.

Mini hood – The Mini hood should be supplied together with the arm and is also interface to the multi-purpose and metal hood.

Mounting – The arms can be mounted on ceilings, walls and floors or fixed to tables. By using an extension profile the arm's operational reach must be increased.

Other – All the arms should be provided with dampers, tight down to an under pressure of 3500 Pa. Air temperature -10 Å C to 70 Å C. Material recovery: 99% by weight.

Components to be provided: Spot Extractor arm, Bracket for Spot Fume Extractor, Multi-purpose hood (380mm x 460mm), Aluminium Extension Profile 1100mm Length, Reducer 75-80 FR Spot Fume.

MATERIALS

Flange	PP
Tubes	Aluminium, surface HM-White
Joints	PP with glass fibre reinforcement
Plastic rings	PP with glass fibre reinforcement
Axial locking rings	PP with glass fibre reinforcement
Adjustment knobs	PP with glass fibre reinforcement screws in stainless steel
Threaded shaft inside joints	Stainless steel
Damper blade	Thermo Plastic Elastomer
Damper adjustment handle	Aluminium, anodized
Internal spring	Stainless steel
Bearings swivel	PP with glass fibre reinforcement
Swivel	Aluminium
Rivets	Stainless steel

Recommended airflows

Ø 50	50-110 m3/h
Ø 75	110-240 m3/h
Ø 100	200-450 m3/h

U. Laboratory Reagent/ Chemical Storage.

It is used for storages of corrosive chemicals and is provided with a ventilation system to enable exhaust of localized fumes emanating from the chemicals stored. The material should be is 1.2 mm CRCA MS with pure Epoxy Powder coating. It must be fitted with a float glass to enable visibility inside the cabinet. It should also have louvers/perforations for air supply. The overall dimensions are 1000 x 486 x 1800 mm (W x D x H)

V. Corner Table

Corner table with storage cabinet and thickness and dimensions as mentioned in the under bench couch and frames, 2 door 2 drawer.

W. Anti Vibration Table

Tubular frame - Completely modular type tubular frame, which carries the load of kadappa and granite, kept on it. High-tension Pan head M6 Zinc black-coated screws (for better corrosion resistance) are used for the fastening. The material used is: 40Sq x 1.6 mm thick ERW tube and the overall load carrying capacity of tubular frame is 250 kgs of uniform distributed load.

Cover Panels – They are 0.8 mm thick CRCA MS sheet and pre-treated and epoxy powder coated for better corrosion resistance. The thickness of powder coat is 45-50 microns which passes the test of Salt Spray for 1000 Hours and having the Scratch Hardness of 3 Kgs.

Kadappa - 25mm thick Kadappa acts as the shock-dampening component.

Work Surface – granite

Vibration Isolating Rubber pads - The objective of using these rubber pads is to absorb the pulsating vibrations coming from the floor. The pads are made up from combination of nitrile rubber, cork particles and cross linked polyester fiber. This high-grade compound material possesses all the physical and mechanical properties required to minimize the dampening effect.

Levelling screws - The Tubular frame has the provision for 4 height adjusters or Levelling Screws that take care of all levelling aspects.

Size: (Width: 600/900mm, Depth: 600mm, Height: 750/900mm)

X. Slotted angle Rack

1. Total 5 loading levels, each level with 100 KGS UDL (Uniformly Distributed Load).
2. Height 2.10 m x 0.90 m width x 0.45 m depth .size $\pm 5\%$ will be acceptable
3. Should have straps for stability at the sides.
4. System should be fully open type, no closing.
5. Colour : matching modular furniture.
6. Surface Finish :
 - a. All Powder coated components should be given anti-rust treatment. The dry film thickness (DFT) after powder coating should be average 35 microns or more.
 - b. All powder coated components should be subjected to an elaborate 4 step, six zone anti corrosion treatment, viz. De-greasing as per IS code, rinsing, phosphating as per IS code and RO water rinsing.
 - c. The testing of paint for various physical and chemical properties should be done as per ASTM Standard 7. **Assembly & Installation** : Racks should be free standing on floor. No welding should be carried out at site. Panels should be fitted with angles using 8mm dia nut and bolt in galvanized finish with equal distance. Straps should be provided diagonally on each loading level of the rack.8.**Angles**:Angle should be roll formed construction made in single piece having slots at pitch of 25mm or lesser. Angle size 35 x 35 mmx 2mm thick or more with one bend and height 2100 mm. The angles should be powder coated finish.9. **Shoe**: Should be provided with plastic shoes on the base. Qty for one unit should be four nos of 40 mm height with plastic finish. 10.**Bend panel**: Should be of at least 6 Bend decking panels. Panel length 900 mm x 450 mm x height 30 mm with 1mm thick (20G) CRCA sheet with powder coated finish. Also there should not be any sharp edges in loading side. Total 6 nos of panels needed for One unit. At least one stiffener should be provided below the panel. 11.**Corner plate** : Corner plate 8 nos for one unit made of CRCA sheet of at least 1mm thick. Surface with powder coated finish 12.**Straps** : A single strap shall be made into cross. Strap width at least 38 mm and pitch of hole 25 mm lesser. Surface with powder coated finish.

Y. Wiring

Electrical sockets, switches and wiring shall be done if required. The specification is given in the BOQ. The rates shall be offered separately. The electrical wiring shall be executed through licensed contractor.

Z. Gas

Gas connections shall be provided wherever required and the specification is given in the BOQ. Rate shall be offered separately.

AA.Certifications

The bidder should have –

- a. ISO 9001-2015 (Certifications for Quality management systems for product manufacturing consistency)
- b. ISO 14001-2015 (Certifications for Environmental management systems, i.e., manufacturing under environment friendly conditions)

BB. Approved Makes

S/n	Item Name	Make
1.	Steel	TATA Steel, JINDAL Steel
2.	Utility Service- Valves, Water Taps & Eye washes, Water Faucets and Gas Valves, Fume Hood Utility Fittings etc	Broen, water Saver
3.	Switches and Sockets, Data and LAN points	North West Electrical Supply, Norisys, Legrand, Crabtree
4.	Hinges- SS Knuckle Butt barrel Hinges	Hafele, Hettich, Godrej
5.	Drawer Slides	Hafele, Hettich, Godrej, Ebco
6.	Drawer Cam Locks	Hettich, Ebco, Godrej
7.	Pneolic Resin Tops	TRESPA, Grey Colour
8.	Sink (PP Sink)	KL Labs, Malaysia, Alloyplass
9.	Storages for Flammable items	Justrite, Asecos
10.	Blowers	Seat, Colasit, premier polymer
11.	Spot Extractors	Nederman, Fumex, Alcidet

CC.PLUMBING WORKS

The required inlet and outlet plumbing water connection if required shall be done by the bidder. The rate shall be offered in the BOQ. The specification is mentioned in BOQ