

DIRECTORATE OF RESEARCH SERVICES
RAJMATA VIJAYRAJE SCINDIA KRISHI VISHWA VIDYALAYA GWALIOR- 474002,
M.P.


E-TENDER NOTICE FOR THE PURCHASE OF LABORATORY EQUIPMENTS/
ITEMS/STRUCTURES

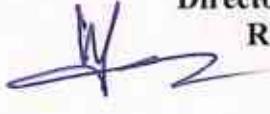



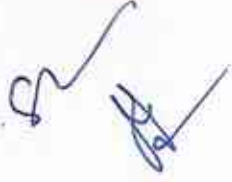



(IPRO/BTC/2023-24/115 dated 15.09.2023)

Following laboratory equipments/instruments/structures are to be procured at Directorate of Research Services, RVSKV, Gwalior for the establishment of Gene Bank at Biotechnology Centre, RVSKVV, Gwalior. This procurement will be carried out through the e-procurement system of www.mptenders.gov.in. On-line bids, under Open Tender Enquiry, following the two bids' systems are invited for supply of these equipments/instruments. Tender documents with specifications can be purchased from this site by paying the stipulated cost as mentioned below:

Item #	Name of the Equipment/ Item/Structure	Document Cost	EMD
Fourth Call			
1.	Herbarium storage racks/cabinet	₹ 2000	₹ 20000
Third Call			
2.	Refrigerated High Speed Micro Centrifuge	₹ 2000	₹10000
3.	Shaker Water Bath (Water Bath and Chillier Circulating Water Bath)	₹ 2000	₹20000
4.	Electron Microscope (Field Emission Scanning Electron Microscope (FESEM) Complete Unit	₹ 5,000	₹800000
First Call			
5.	Wall paneling work of existing room	₹ 3,000	₹30000
6.	Lab Furniture for Gene Bank	₹ 5,000	₹ 90000
7.	Servo-type Voltage Stabilizer	₹ 2,000	₹ 10000
8.	Air Conditioner	₹ 1,000	₹ 3000

Please read and follow the instructions carefully to avoid the rejection of the tender. You may also send your representatives, duly authorized in writing to attend the Technical Evaluation and clarification regarding bids which is scheduled at 3:00 PM on 19th October, 2023 at Office of Directorate, Research Services, RVSKVV, Gwalior.


Director Research Services
RVSKVV, Gwalior

DIRECTORATE OF RESEARCH SERVICES
RAJMATA VIJAYRAJE SCINDIA KRISHI VISHWA VIDYALAYA GWALIOR- 474002,
M.P.

E-Tender Document

CRITICAL DATES

S. No.	Item	Date	Time
a)	Publishing Date	15 September, 2023	16:00
b)	Document Purchase Start Date	15 September, 2023	10:30
c)	e-Bid Submission End Date	16 October 2023	17:00
d)	Physical bid document Submission end date in the Office physically at Office of Directorate, Research Servicers, RVSKVV, Gwalior	19 October 2023	17:00
e)	Opening of the Technical Bid at Office of Directorate, Research Servicers, RVSKVV, Gwalior	20 October 2023	15:00
f)	Technical Evaluation of Bids at Office of Directorate, Research Servicers, RVSKVV, Gwalior	20 October 2023	15:00
g)	Financial/Price Bid e-Opening Date at Office of Directorate, Research Servicers, RVSKVV, Gwalior	01 November 2023	15:00

DEPOSITING THE BIDS:

The bids will be submitted through on-line mode of www.mptenders.gov.in. However, certain documents would be required to be submitted physically to our office. Details are as follows:

(A) On-line Submission:

(i) Cover-I: Will contain the Technical Bids with the following documents:

- Detailed technical write-up highlighting the model Name/Number features of the equipment offered and / or technical literature/manuals.
- Certificate for acceptance of terms and conditions of tender enquiry on firms' letterhead.
- Original Equipment Manufacturer (OEM) certificate or authorized dealership/distributorship certificate as applicable.
- Manufacturing Registration No.
- Company Printed Price List (If available)
- Last 3 (three) years Income Tax Return.
- Audited Balance Sheet for Last 3 (Three) years.
- TIN number/PAN Number/Certificate/GST number
- Business Registration Certificate.
- Supplier should have at least an average annual turnover of **Rs one Crore** for major equipments and **50 lakhs** for minor items for last 3 years.
- Scanned Copy of EMD as shown against each item.
- Compliance Certificate. Certificate of clause-by-clause compliance of specifications as mentioned in tender.



(B) Physical Submission:

Following documents to be submitted in hard copy physically in a sealed envelope by Speed Post/Registered post to reach prior to bid submission closing date & time. The responsibility to ensure this lies with the Bidder.

Please do not submit the hard copy of "Commercial/Price bid".

- All the documents submitted on-line in Cover I.
- **EMD as shown against each item on-line submitted and proof enclosed physically.**
- Tender fee receipt copy (as applicable).
- Tender conditions Acceptance Certificate in form of downloaded Tender documents duly stamped and signed.
- Client list/ List of users on manufacturers' letter head duly stamped and signed.
- User Certificate with Phone No. and E mail address.
- Guarantee/warranty on manufacturers' letterhead.
- The supplier is bounded to supply spare parts of equipments for the **at least next 10 years.**

GENERAL TERMS AND CONDITIONS:

1. *Only the manufactures and/or their authorized dealer/distributors/sole agents/ need to submit their tender. The authorized firms should furnish a certificate from the manufacturer for their dealership/distributorship in original with the physical bid otherwise the offer will not be considered.

2. No person or firm shall submit more than one Tender for the same item. No offer should have more than one model quoted; in case of more than one alternate offer only the first option will be considered.

3. It is mandatory to provide all the relevant information in **Annexure -I**.

4. Broad-based specifications of equipment/items/systems/works *etc.* are given in **Annexure- II** of purchased tender. The tenderer should also take note of the remarks, if any, given their in.

5. a. Last date for submission of e-Tender is 16.10.2023 up to 5:00 PM on www.mptenders.gov.in.

b. Tender must be submitted in sealed cover to the **Office of Director Research Services, RVSKVV, Gwalior 474002** by **Registered/Speed Post**, to reach on or before dated 19.10.2023, AT 5:00 PM.

c. Belated tender due to postal or any other delay will be rejected.

d. The tender for each item should be sent separately. The duly sealed envelope should super scribe TENDER FOR THE ITEM No _____ (NAME OF THE EQUIPMENT) DUE ON 20th October 2023 with reference number.

e. If offers for more than one item are clubbed together, tender will be rejected.

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f. The tender offers should have a validity of 180 days or more from the due date. The tenders will be valid for 6 months from the date of opening and may be **asked for extension by taking written concern of the firms if needed.**

g. Price bid will be opened online at www.mptenders.gov.in on 01-11-2023 from 3:00 P.M. to 5.00 PM. If date of opening of price bid will be changed due to any circumstances. That will be informed to bidders.

h. R.V.S. Krishi Vishwa Vidyalaya (RVSKVV) reserves the right to extend the opening due date and or the date of opening the tenders.

i. All the leaflets in the offer should be marked with signature and seal of authorized person.

6. a. The rates quoted should in Indian Rupees (₹) for a **single complete unit** with F.O.R. delivery at RVSKV, Gwalior. The rates quoted should be inclusive of packing and forwarding charges/loading/unloading/handling charges/freight/full risk coverage/insurance, etc. In case of imported goods all the expenses towards custom duty, clearing charges and transportation with insurance will be borne by the firm/tenderer and they must quote the rates inclusive of all FOR, RVSKV, Gwalior in INR.

b. Excise duty/Sales Tax/GST/Custom duty (with and without concession certificate) and other levies, if any should be shown separately and the **total price** of each item should be worked out incorporating the all.

c. Any other charges, such as technical service charges, cost of training, installation charges, TA/DA of tenderer's staff etc. if any, should be shown separately for each item and each sub-item and the total price of each item should be worked out incorporating the same in final quoted price.

7. All losses during transit will have to be made good by the tenderers at his cost within a period of 15 days.

8. The tenderers must provide guarantee/warranty on **manufacturers' letterhead** of satisfactory functioning of the equipment/system and free service including free replacement of parts for a period of at least **3 years** from the successful and satisfactory installation of the equipment/system. Original to be deposited by the successful bidder at the time of supply.

9. Performance Guarantee: The Successful bidder/supplier will be required to furnish a Performance Guarantee in the form of FDR from a public sector bank or a private sector bank authorized to conduct government business for a sum equal to **10%** of the Supply Order value within 30 days of signing of the Supply Order. Performance Bank Guarantee will be valid up to 3 years beyond the date of guarantee/warranty.

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10. Offer must be accompanied by **Earnest Money** as stated against each item must be submitted **online**. Without the deposition of earnest money, the offers will be rejected.

11. The standard terms and conditions of payment is in full only after the installation is affected to the satisfaction of RVSKVV authorities in INR only.

12. Please quote maximum discounted price, as no further negotiations will be made.

13. Complimentary items/gifts offered will not be given any preference and will not be considered for calculating the cost of the item.

14.*The offers must mention make, model all the specifications of the item clearly. The company must enclose printed literature/catalogue/manufacturer's web-site showing detailed technical specifications required. A folder showing many instruments without detailed technical specification, or tailor-made literature mentioning "yes" or "as per your specifications" for the specifications asked for, will not be considered. Specifications given in the offer must match to the website and/or printed technical literature otherwise the offers shall be rejected.

15. Technical specifications of the equipment / items have been very clearly formulated by the users/experts of the field as per the requirement of the work to be conducted. It will be sole discretion of the bidder whether to quote or not for equipment with particular specifications.

16.*Firm must provide a compliance statement vis-à-vis specifications in a following "tabular form" clearly stating the compliance, supported by technical literature with clear reference. This statement must be signed, with the company seal, by the Tenderer for its authenticity and acceptance that any incorrect or ambiguous information found submitted will result in disqualification of the offer.

Name of Equipment:		
Technical Specification	Compliance (Y/N)	Deviation, If any

17.*Offer must be accompanied with a comprehensive list of users on manufacturers' letterhead, wherever possible bidders may also provide certificates for satisfactory working of the equipment from users of universities and institutions of repute.

18. a. If so desired by RVSKVV, the bidders shall have to enter in to an agreement.

b. Any wrong information about item, any forged document and any deviation, variation of non-compliance of the terms and conditions by the tenderers shall be considered as a breach of contract and RVSKVV reserves the right to forfeit the amount of earnest money and/or security deposit in full and take action as per legal arrangement.

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19. Should there arise any dispute, the Hon'ble Vice Chancellor, RVSKVV, Gwalior shall be the sole Arbitrator whose decision in the matter shall be final and binding. Each and every judiciary transaction shall be subjected to Gwalior only.

20.*Tender will not be considered if the firm does not supply a copy of the TIN/ GST& PAN/ Registration of the firm allotted to it for relevant items. PAN of the owner or any other persons will not be accepted.

21. This tender is being issued with no financial commitment and the Buyer reserves the right to change or vary any part thereof at any stage. Buyer also reserves the right to withdraw the tender, should it become necessary at any stage.

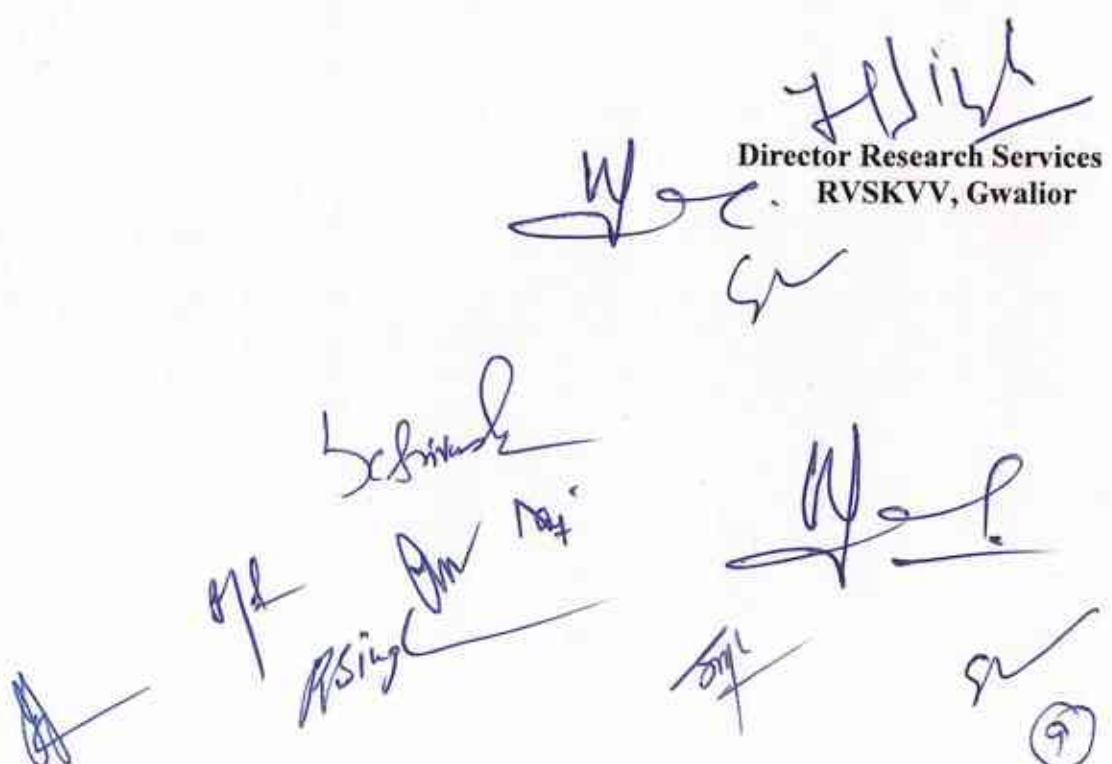
22. RVSKVV reserves the right to accept or reject any or all offers in full or in part without assigning any reason (s) thereof. It also reserves the right to place an order wholly or in part with one or more than one firm as it may be convenient to RVSKVV, Gwalior.

23. The tenderer shall have to give an undertaking that the terms and conditions as mentioned above of this tender are acceptable to the tenderers in form of downloaded Tender documents duly stamped and signed.

24. If firm wishes, they can send their representatives, duly authorized in writing, to attend the Technical Evaluation and clarification regarding bids which is scheduled at 3:00 PM on 20th October, 2023.

25. In case, if single manufacturer of the any item and having propriety rights. Items may be purchased with the permission of concerned higher authority.

Dated: 14-09-2023



The image shows several handwritten signatures and stamps. At the top right, there is a signature above the printed text "Director Research Services RVSKVV, Gwalior". Below this, there are several other handwritten signatures and initials, including one that appears to be "Singh" and another that is a circled "9".

DIRECTORATE OF RESEARCH SERVICES
RAJMATA VIJAYRAJE SCINDIA KRISHI VISHWA VIDYALAYA GWALIOR 474002, M.P.

SUPPLEMENT / CHECK-LIST TO BE PROVIDED WITH TECHNICAL BID

ITEM No. _____ NAME _____

S.No.	Information required	Proposed
1.	Make of main item	
2.	Model of main item	
3.	Name of manufacturer of Main Item	
4.	Country of origin of main item	
5.	Name, Make and model of sub item I (if any)	
6.	Name, Make and model of sub-item II (if any)	
7.	Name, Make and model of sub-item III (if any)	
8.	Delivery within (days)	
9.	Rate of Excise duty (%) with surcharge, if applicable (item-wise if different ED is applicable)	
10.	Rate of GST (%) livable. If no, state basis and terms of the exemption.	
11.	Is Service Tax extra? If yes, rate of Service Tax livable (%)	
12.	Is Custom Duty Exemption (CDE) required? If yes, Rate of Customs Duty (%) payable.	
13.	Any other Taxes / Duties / Octroi / Entry taxes <i>etc.</i> in %	
14.	Order to be placed on	
15.	Guarantee/Warrantee (3 years)	
16.	Validity (at least 180 days)	
17.	FOR: RVSKVV, Gwalior?	
18.	List of current users (Attach, if any)	
19.	Certification of satisfactory working of the equipment (Attach, if any)	
20.	Compliance of equipment with current directives of ISI / CE / EEC / US / EU or equivalent standards	
21.	Whether manufacturer / authorized distributor/sole agent? (Attach original certificate)	
22.	Technical literature (Attach, if any)	

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23.	Earnest money (EMD) deposited on line and proof has been enclosed	
24.	Situations of Authorized service centers/ service personals <i>etc.</i> (Provide complete address)	
25.	Relevant documents such as ITCC, ST registration shop Act. establishment certificate, factory registration <i>etc.</i> (enlist and attach)	
26.	TIN and PAN allotted (Attach a copy)	
27.	GST number	
28.	Any other relevant information	

DECLARATION

The terms and conditions as mentioned in the tender are acceptable to us.

Authorized Signatory

(Seal of the Firm)

SPECIFICATIONS

ITEM NO.1 HERBARIUM STORAGE RACKS/CABINET (FOURTH CALL)

Cabinet Construction:

- Herbarium storage racks/cabinet with double doors, including 50-55 compartments.
- Size: 50-60"W x 20-24" D x 80-85" D.
- Suitable to keep botanical specimens safe from dust, light, insects and water.
- All-welded heavy-duty steel construction with 18-gauge doors, tops, bottoms, backs and sides and 12-gauge base.
- Steel inserts constructed of 20-gauge metal.
- All edges are folded for a smooth surface to prevent snagging of folders.
- Doors with four-point or six-point latching system for air-tight storage.
- Locking compression handles.
- Should be supplied with 100% non-off gassing silicon gaskets.
- Removable doors capable of lifting off of the hinges.
- Glass or solid doors.
- Leveling base.
- Solvent-free powder-coated finish.
- With large pull-out work shelf /Vents.

Shelf Construction Details:

- One-piece 18 gauge formed steel shelves with 20-gauge reinforcements.
- 16-gauge adjustable support rails for shelves.
- Shelves adjustable on 3/4" centers with no tools required (counter high cabinets adjust on 1" centers).
- Standard shelf load capacity 250 lbs; heavy-duty shelf load capacity 500 lbs of evenly distributed weight per shelf.

Tray Construction Details:

- 18-gauge welded construction.
- Adjustable on 3/4" center.

ITEM NO.02 REFRIGERATED HIGH SPEED MICRO CENTRIFUGE (THIRD CALL)

- Microprocessor controlled table top refrigerated micro centrifuge for 1.5-2 ml tubes.
- Display speed in rpm and/or g-force.
- RCF: above $\geq 24,000xg$
- Speed above $\geq 15,000$ RPM
- CFC free rapid cooling system.
- Brushless maintenance free drive
- Temp range: $-5^{\circ}C$ to $+40^{\circ}C \pm 1^{\circ}C$.
- Temp. Increments $1^{\circ}C$.
- Timer: 10 sec-99min.
- Last run memory.

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g/s, Am, R/Sing, Raj, S. Prasad, W. L., S. R., and a circled number 12.

- Automatic door opening facility after the run.
- 24x1.5-2 ml tubes rotor
- Large LED display for Time, Speed and Temperature.
- Max Noise Levels : ≤ 60 dBA.

**ITEM NO. 3 SHAKER WATER BATH (WATER BATH AND CHILLIER
CIRCULATING WATER BATH) (THIRD CALL)**

(A) Water Bath

External control for on/off scheduling.
 Ambient $+5^{\circ}\text{C}$ to 99°C .
 0.1°C setting resolution.
 Drain tap & transparent lid.
 Timer & presets.
 Adjustable over temperature alarm.
 230V models.
 Must have set and forget technology.
 Polycarbonate Lid.
 12L capacity.
 Stability 0.2°C .
 Wide angle viewed LED display.
 Front panel lock facility.
 Count down timer (1-999 minutes) with audible buzzer.
 User calibration.
 3 programmable temperature presets.
 Advance dry run protection.
 Non drip clear lid.

(B) Chillier circulating water bath

Temperature range	-25°C to 150°C
External control for ON and Off scheduling	Must
Temperature stability	0.02°C
Flow rate (max)	14 – 22 Ltr/ min (adjustable)
Pump pressure (max)	530 m bar
Tank volume L	6L
Working Area (D x W)	120-130 X 150-160
Min/Max liquid level	130/145
Calibration points	5
Programs	1 x 30 segments
Communication interface	USB
Temperature probe socket	6 pin mini DIN
Display	Full colour QVGA TFT
Languages	5 (EN, FR, DE, IT, ES)
Timer	1 min to 99 hrs 59 mins

Schmitt

Temperature presets	3
Alarms	High and low
Electrical power (max) W	2280/2760 (60/50 Hz)
Safety	Adjustable over temperature cut-out
Ready to use kits	Assembled and supplied with standard tubing, insulation, clips and connectors

Note: Please quote the rate for both capacities (A&B) separately

ITEM NO.04 ELECTRON MICROSCOPE (FIELD EMISSION SCANNING ELECTRON MICROSCOPE (FESEM) COMPLETE UNIT (THIRD CALL)

High resolution Field Emission Scanning Electron Microscope (FESEM) having fully automated microscope setup with Energy Dispersive Spectroscopy (EDS) and Sputter Coater, system should have specification similar or better than as given below.

1	Electron Gun	High brightness Field Emission Schottky Emitter
2	Image Resolution	<ul style="list-style-type: none"> Resolution with SE detector 0.8-1.2nm at 15 kV or better Resolution with BSE detector 1.0- 2.0 nm at 1-30 kV or better
3	Accelerating voltage	Adjustable from 200 eV to 30 KeV
4	Probe Current	<ul style="list-style-type: none"> Variable from 2-3 pA to 100-400 nA or better. Probe Current should be continuously adjustable by entering the desired value in [pA or nA] Beam Spot Size should be continuously adjustable by entering the desired value in [nm] Probe current setting must be fully automatic without need for column tuning or change of aperture
5	Magnification	10 x to 10,00,000x or better
6	Imaging Modes	<ol style="list-style-type: none"> Resolution mode for high resolution imaging. High Depth mode for enhanced depth of focus. Wide Field mode for extra-large non-distorted field of view with measurement facility. Changing from one mode to another should be fully automatic and software controlled.
7	High Vacuum System	<p>Should have IGP for GUN and TMP with dry scroll pump for ultra-clean and fast pumping.</p> <ul style="list-style-type: none"> Chamber Vacuum: 10^{-3} Pa or better Gun vacuum: 10^{-7} Pa or better Pumping time: Less than 3.5 minutes after specimen exchange.
8	Low vacuum mode	<p>The system should be able to image in the low vacuum mode for charge compensation of non – conducting samples with</p> <ul style="list-style-type: none"> Differential pumping systems for specimen chamber Low Vacuum Range: 1 – 700 Pa or better, continuously variable
9	SEM Chamber	<ul style="list-style-type: none"> Internal Diameter: 230 mm or more Max specimen height- 50-145mm or better Max sample size- 145mm(X) x 145mm(Y) Chamber ports 12 or more with ports for future upgradation like EDS, WDS, EBSD, etc.

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10	Specimen Stage	<ul style="list-style-type: none"> All 5 axes fully motorized compucentric stage with X = 80 mm or higher Y = 60 mm or higher Z = 50 mm or higher Tilt from -10° to $+80^{\circ}$ or better Rotation: 360 degrees continuous Multi sample holder for holding 7 or more sample stubs. Stage movements must be fully Software controlled for absolute or relative co-ordinate movements, storing of positions, resorting to saved positions, moving to pre-set specimen positions, mouse click to Centre moving, drag with mouse, WD & Z movement synchronization.
11	Standard Detectors	<ul style="list-style-type: none"> Chamber SE Detector preferable with YAG scintillator Chamber BSE detector. A fully retractable BSE detector with YAG scintillator will be preferred. Detector for Probe current measurement: Integrated Pico ammeter with faraday cup for continuous display of probe current / absorbed current.
12	Anti-vibration support:	SEM Chamber and Electron Gun Should have a built in, fully integrated self-leveling pneumatic vibration isolation.
13	SEM Automated Operation	<ul style="list-style-type: none"> WD (Focus) & Stigmator Contrast & Brightness Scanning Speed (According to Signal – Noise Ratio) Gun heating Gun centering Column Centering Vacuum Control Auto-diagnostics Direct and continuous control of beam spot size Direct and continuous control of beam current All parts including valves, apertures should be operated through computer-controlled software.
14	SEM Computer	Intel® Core i7-, RAM 16GB, HDD 1TB, Windows 10 64-bit 24-inch screen
15	Image Acquisition and display	<ul style="list-style-type: none"> 32-inch HD LCD screen Scanning Speed: From 20 ns to 10 ms per pixel adjustable in steps or continuously Image Size: Selectable up to 8,192 x 8,192 pixels or better Image Depth: Up to 16 bits per channel Image Formats: BMP, TIFF, JPEG, JPEG2000, GIF, PNG or PGM, PPM Point & Line Scan, Image rotation, Image shift, Tilt compensation Dynamic Focus – in plane or folded plane Multi Detectors Display: Displaying of up to 4 live detector signals simultaneously in four frames side by side Detector Mixing: Provision for mixing in user defined ratios& display of different live signals from same field of view. Signal averaging using Frame Accumulation or Line Accumulation Pseudo coloring: Provision for Images to be artificially colored using colour mapping.
16	3D Imaging	1. 3D image acquisition with stage tilts / beams tilting / scanning around XY axis

		for 3D imaging. 2. 3-D Imaging Software for Live Stereo Imaging with storage in AVI format.
17	SEM Software	<ul style="list-style-type: none"> • Image Operations • Analysis & Measurement • Image Processing • Image Measurement • 3D imaging using Beam tilting / scanning around XY axis for 3D scanning and imaging • Remote control network software with internet TCP / IP open protocols. • Built-in self-diagnostics for system readiness check • 3-D Imaging Software for Live Stereo Imaging with storage in AVI format
18	EDS System:	<ul style="list-style-type: none"> • EDS X-Ray Micro Analysis System • Liquid Nitrogen Free EDS detector • SDD type crystal with active area 30 mm sq • Resolution 129 eV or better. • Silicon Nitride window • Software capability for qualitative quantitative analysis • ZAF algorithm for bulk samples • Intensity mapping line scan multipoint analysis
19	Spares and Consumables	Spare parts and consumable availability should be 10 years.
20	On-Line UPS	6kVA on-line UPS with minimum 30 minutes back up
21	Essential Accessories	<ul style="list-style-type: none"> • Track ball for imaging operations • IR Chamber scope: Chamber view camera (IR CCD) • Touch alarm safety detector for specimen stage and detectors. • TCP / IP Remote control Network interface & software for remote operations and on-line fault diagnostics. • All essential operating accessories like air compressor, gas cylinders, regulators, chillier, etc., if required have to be included in the offer.
22	Sputter Coater	<ul style="list-style-type: none"> • Rotary pumped sputter coater, suitable for coating specimens with noble metals, such as gold / palladium alloys, • Should be combined with carbon coater, using carbon fibre to coat SEM specimens. • Two stage rotary pumps with oil mist filter. • Should include all consumables including gold target and carbon fibre for one years of operations.

ITEM NO.5 WALL PANELING WORK OF EXISTING ROOM (FIRST CALL)

S.No	Detail Specification	Qty required
1	Fixing of wooden paneling on wall of the conference hall with necessary hardware with the following specifications: Providing and fixing of wall paneling : Should be made up of 18 mm thick ply in proper level with required support frame work. Face of the wall paneling should be finished/covered with 4 mm thick teak ply duly polished with melamine finish or 1	120 square meters

	mm thick sunmaika bonded to the surface of the ply using high strength cross linked PVAC based adhesive. The core/base or interior of the frame should be filled with resin bonded rockwool/glass wool of a minimum density of 64 kg/cum and a 3 mm thick sound damping layer covered with black colored cloth of minimum 2 mm thickness to fix glass wool properly on the wall surface.	
2	P/F of acoustical Door: P/F of acoustical door at the entry of the conference hall. The door frame should be made up of hard wood of size 50 mm thickness, including making necessary grooves for fixing of hollow bulb type EPDM Gasket on the rebates. The core of the door shutter should be filled with resin bonded rockwool of a minimum density of 64 kg/cum and a 3 mm thick sound damping layer. Face panels should be 12 mm thick BWP ply conforming to IS770 on both sides of the core of the shutter. Both the faces should be finished with 4 mm thick teak ply /1mm thick sunmaika bonded to the surface of the ply using high strength cross linked PVAC based adhesive. The door assembly should be fixed to the door frame with heavy duty stainless steel hardware like SS hinge with 4 ball bearing, each door leaf to be fixed with 4 nos. SS hinges. The door should also be provided with Brass door handle 300mm C-shaped, Brass Tower Bolt 300 mm and Mortice lock with lock body, C-shaped round bar handle and Pin cylinder lock with 6 pin mechanism and one side key and one side knob, and door closer also should be provided. All these items should be included with the cost of the door.	3 square meters
3	P/F of looppile carpet of 5-6 mm +/- 5 mm thickness to be pasted on the floor with good quality adhesive. Providing and fixing of good quality hit sheet of 8 mm thickness below the carpet. The carpet should be pasted above hit sheet.	120 square meters
4	Providing & Fixing premium quality Manually operated Roller blinds with pelmet with Pre-stressed Micro-Aerated Solar protection fabric of high tenacity Polyester Yarn with PVC Coating & Fungistatic Treatment and should block the light flux & offer elimination of glare and sunlight. Brackets should be of tomised steel powder coated to give superior finish. Bracket should accommodate overhead, side or face mounting with clutch assembly on either end of the roller. Bottom of the blind should be provided with aluminum tube powder coated in a colour matching to the fabric. The fabric should be enclosed in the suitably created pocket along with the tube. The tube should be closed from sides with end caps to give a neat look.	22 square meters

Note: Please quote the pooled cost for all items with required quantities mentioned in above table.

ITEM NO.6 LAB FURNITURE FOR GEEN BANK (FIRST CALL)

S No.	Item Description	Qty required
1	Providing and fixing of computer lab table with CPU trolley: Table Size should not be less than 1175 Width x 440 Depth x 740 Height. The top should be minimum 17 mm thick PLT with PVC lipping. The colour of Table top should be white cedar, side panels should be in black and the Modesty panel should be a combination of black & white colour.	6

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2	<p>ANTI VIBRATION TABLE: Should be provided and fixing of size should not be less than Width: 890 mm, Depth: 590 mm, Height: 880mm, Tubular frame - Completely modular type tubular frame, which carries the load of granite, kept on it. High-tension Pan head M6 Zinc black-coated screws (for better corrosion resistance) should be used for the fastening. The material to be 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 should be 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. Work Surface – granite. Vibration Isolating Rubber pads - to absorb the pulsating vibrations coming from the floor. The pads are made up from combination of nitrite 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.</p>	1
3	<p>Providing and fixing of Sliding door units: Overall dimensions should be 900mm (W) x 450mm (D)x 710 mm (H) .The top should be wooden top PLB (25 mm add in unit height) . The Rigid Knock Down Construction, Back , Sides and Door should be made from 0.7 mm high yield strength CRCA, rest in 0.8 mm CRCA. CRCA - 'D' Grade as per IS-513 standard. Sliding door arrangement should have sliding door with top hanging arrangement to prevent derailment. Each door should be provided with 2 plastic rollers having steel ball bearing for smooth movement of door and less noise. Locking should be 5 lever cam lock for safe locking. Handle should be plastic flush & recessed handle. Shelving should have height wise adjustable shelf mounting. Uniformly Distributed Load Capacity of the shelf should be min 40 Kg maximum. Sliding door units should have 1 no. of adjustable full shelves. Leveler should be screw type leveler with hex plastic base and overall finish should be epoxy polyester coated to the thickness of 50 microns. The products should be Indoor Advantage Gold, GRIHA & Greengard certified. Design as per approved by Technical Committee. Certificates to be submitted.</p>	16
4	<p>Providing and fixing of Sliding door units: Overall dimensions should be 1200 mm(W) x 450 mm (D) x 710 mm (H) .The top should be wooden top PLB (25 mm add in unit height). The Rigid Knock Down Construction, Back, Sides and Door should be made from 0.7 mm high yield strength CRCA, rest in 0.8 mm CRCA. CRCA - 'D' Grade as per IS-513. Sliding door arrangement should have sliding door with top hanging arrangement to prevent derailment. Each door should be provided with 2 plastic rollers having steel ball bearing for smooth movement of door & less noise. Locking should be 5 lever cam lock for safe locking . Handle should be plastic flush & recessed handle. Shelving should have height wise adjustable shelf mounting. Uniformly Distributed Load Capacity of the shelf should be min 40 Kg maximum. Sliding door units should have 1 no. of adjustable full shelves. Leveler should be screw type leveler with hex plastic base and overall finish should be epoxy polyester coated to the thickness of 50 microns. The products should be green pro, Indoor Advantage Gold, GRIHA & Green guard certified. Design as per approved by Technical Committee. Certificates to be submitted along with bid.</p>	12

5	<p>Providing and fixing of Table: Table should be 1490 Width mm x 740 Depth mm x 720 Height mm. Top should be 18 mm (+/- 2 mm) thick pre-laminated particle board all work surface edges should be having duly sealed with 2 mm thick PVC edge banding. Understructure Modesty Panel 18 mm thick pre-laminated particle board. The Rectangular frame should be fabricated component in 1.2 mm thick CRCA, Finish : powder Coat (epoxy polyester). Leg should be fabricated component in 38 mm x 25 mm 1.2 mm thick MSERWATube, finish powder coat (epoxy polyester).The plastic cap for cable travel should be injection moulded polypropylene and leveler glide of nylon 6 & MS bolt. The storage should be having shell and drawer tray 0.6 mm thick CRCA Finish powder coat (epoxy polyester) plus the drawer front should be 0.8 mm thick CRCA Finish powder coat (epoxy polyester) plus lock with 10 lever and handle and leveler. The wire management should be horizontal wire carrier 0.7 mm thick CRCA Finish powder coat (epoxy polyester) and vertical wire carrier 0.8 mm thick CRCA Finish powder coat (epoxy polyester) . The products should be Green pro, Indoor Advantage Gold, GRIHA & Green guard certified. Design as per approved by Technical Committee. Certificates to be submitted along with bid.</p>	4
6	<p>Providing and fixing of storwel: Storwel should have an overall size of 760 mm (W) x 440mm (D) x1260mm (H) with welded construction. It should have the shelf thickness of 0.7mm, Back thickness of 0.8mm and all other components should be 0.9mm thick. These components are made of CRCA 'D'grade high yield strength as per IS:513. The storwel minor should have a three-way locking mechanism with shooting bolts. It should have a height wise adjustable shelf mounting (3 nos.) which should have a uniformly distributed load capacity of max 40 Kg. It should also have a M10 Screw type Leveler with Hex plastic base. The finishing should include epoxy powder coated to the thickness of 50 microns (+/- 10). The products should be Green pro, Indoor Advantage Gold, GRIHA & Green guard certified. Design as per approved by Technical Committee. Certificates to be submitted along with bid.</p>	6
7	<p>Supply and Installation of tables: Size should not be less than 1190 mm x D 870 mm with electric tracking and granite worktops. Furniture shall meet the performance requirements and should follow SEFA8 guidelines. All C-Frames assemblies should be manufactured from standard hollow metal 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.The suspended under-bench welded units should be supported on heavy-duty steel frames fully carrying the load of worktops. C-frame should be constructed from a rectangular pipe with a cross section of 60mm x 30mm and should be 2 mm thick and should be without a vertical front leg to give a clean look. This should provide more knee space or leg space and would facilitate uninterrupted lateral movement of the under-bench units within the bench run. The C-frame legs should be supplied with adjustable feet (tolerance from -5mm to +20mm) to correct the unevenness of flooring. The tubular enclosed type construction shall discourage dust accumulation and unwanted development of bacteria & fungus. Drainage gradient should be well adjusted throughout the length of table and should have horizontal supports for drainage systems. The structure should have a removable back panel to provide access for maintenance throughout the length of table. The C-frame should also have skirting at back bottom side. The table depths should be 900 mm. All frame-work should be pre-treated with superior pure epoxy powder coated finish. Horizontal Members should be made from rectangular pipes of 2mm thickness. Cross-sectional dimensions of the pipe should be 60 x 30 x 2 mm. They should be made of CRCA MS and coated with pure epoxy powder. These connect two C-Frames together using C-clamps/U-clamps. Together with the C-Frames and Horizontal Members connected, the skeletal structure of the work-bench should be formed</p>	7

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	<p>on which the worktop could be placed and the hanging-type storage cabinets could be suspended. Horizontal Members determine the width of the lab workbench as they form the member (distance) between two adjacent C-Frames. Removable back panels should be covering the service lines that run behind them. These should be easily removable (unclipped) and the service line be accessed for maintenance. This allows the equipment on workbench to remain undisturbed. They should be made of CRCA MS with pure epoxy powder coating and are of 1mm thickness. Master Upright should be of the dimensions: 300 x 150 x 1.2 mm. It should be made from 1.2mm thick CRCA MS with pure epoxy powder coating. It should have an open-able door for easy service maintenance and should extend till the false ceiling. Vertical Upright with option for internal distribution of GDS, Electrical supply systems Shelves and Top Units and should be constructed from 16-gauge CRCA formed steel panels with removable covers. Shelf height should be adjusted with an increment of 1inch / 25mm. Upright should also provide support to Top Units for hanging thus eliminating the danger of fixing the Top Units on non-rigid partition wall / panels. Uprights should be supplied with adjustable feet from -5mm to +20mm. Electrical Trunking should be mounted on Granite top for housing electrical switches and sockets, trunking should be made from 1.0 mm thick CRCA MS panel. It should be made from CRCA MS with pure epoxy powder coating. The front surface that houses the electrical points should have a slope. Worktop should be 19 mm (+/- 2mm) thick Jet Black Granite worktop. The exposed edges of the worktop should be chamfered and smoothed. The bottom of the worktop should be polished and there should be a V-groove throughout the length of the exposed edges to protect the cabinets from connecting the spillages. The backing material used is a neoprene mat of 6 mm thickness.</p>	
8	<p>Providing and fixing Welded Over-Head Storage Cabinets: Welded cabinet body should be of flush face construction with intersection of vertical and horizontal members like LH and RH side, back panel and bottom panel. Cabinet should be of square non-sharp edge construction. Doors should be assembled with SS-304 hinge assembly. Removable back panel should be provided. Knee space panel should be in 22-gauge construction. Thickness: LH/RH side panels, shutter front, Bottom panel, Top front, shelf, should be of 1.2mm thk. Removable Back panel, Shutter cover, Fr. Rack strip, Top cover panel should be of 0.8 mm thk. Finish: Powder coating pure epoxy, thickness 40-50 microns. Units have a locking facility with 180° and 10 lever cam lock mechanism. The height of these cabinets should be around 635mm while the depth should be around 340mm. The shutters should be made up of metals. There should be one height-adjustable shelf inside each cabinet. Other construction should be like under-bench cabinet. Welded cabinets should be third party tested for SEFA 8M, SEFA 10M and EN13150 and EN14727 by SEFA/NABL approved lab.</p>	46

Srivastava



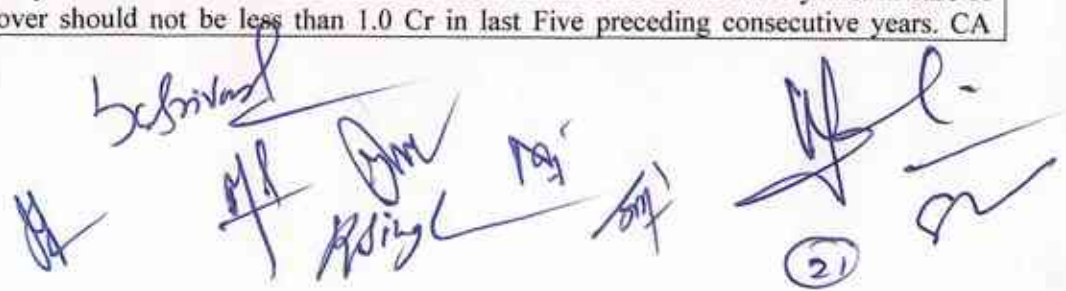
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9	<p>Providing and fixing of visitor chairs: GRIHA certified having SEAT/BACK Assembly made up of 1.2 ±0.1cm. thick hot-pressed plywood and upholstered with-fabric upholstery covers and moulded Polyurethane foam. The back foam should be designed with contoured lumbar support for extra comfort. The seat to be extra thick foam on front edge to give comfort to popliteal area. Back Size should be 47.5 cm. (W) x 58.0 cm. (H) and Seat Size 47.0 cm. (W) x 48.0 cm. (D) with High Resilience (HR) Polyurethane Foam to be moulded with density of 45±2 kg/m³ and hardness load 16±2 kgf as per IS:7888 for 25% compression. The Armrests: The one-piece armrests are injection moulded from black Co. polymer Polypropylene. The reading chairs should have Tubular Frame which is powder coated (OFT 40-60 microns) tubular frame is cantilever type & made of 02.54 ±0.03cm x 0.2 ±0.016 cm thick. M.S. ER.W. Tube. The products should be Green pro, Indoor Advantage Gold, GRIHA & Green guard certified. Design as per approved by Technical Committee. Certificates to be submitted along with bid.</p>	6
10	<p>Providing and fixing of Revolving chair: The Seat & Back should be made up of 1.2 ±0.1cm thick hot-pressed plywood & seat is made up of 1.5±0.1cm thick hot-pressed plywood measured as per QA method described in OCP-QLTA-P14-18 and upholstered with fabric upholstery covers and moulded Polyurethane foam. The back foam is designed with contoured foam lumbar support. The seat has extra thick foam on front edge to give comfort to popliteal area. The Chair Seat & Back Size should not be less than Back Size 51.0 cm. (W) x 68.0 cm (H). Seat Size 53.0 cm. (W) x 51.0 cm (D). High Resilience (HR) Polyurethane Foam: The HR polyurethane foam is moulded with density of 45±2 kg/m³ and hardness load 14±2 kgf as per IS:7888 for 25% compression. Armrest Top should be PU moulded over glass filled Nylon insert. Center Tilt Synchro Mechanism with Lock: The mechanism is designed with the following features: 360° revolving type, 3 position locking with anti-shock mechanism. Tilt tension adjustment. Pneumatic Height Adjustment: The pneumatic height adjustment has an adjustment stroke of 9.5± 0.3 cm. Pedestal Assembly: The pedestal is injection moulded in black glass-filled Nylon and fitted with 5 nos. twin wheel castors. The pedestal is 66.1±0.5cm. Pitch-center dia. (76.1±1.0cm with castors).Twin Wheel Castors: The twin wheel castors are injection moulded in Black Nylon. The products should be Indoor Advantage Gold, GRIHA & Greengard certified. Certificates to be submitted along with bid.</p>	5

Note: Please quote the pooled cost for all items with required quantities mentioned in above table.

Terms and Conditions for Lab Furniture for Geen Bank

1	Tenders are invited from Manufacturers or their authorized dealers (from the principal of the brand being offered for at least Seven years with their local/M.P. service setup – response time – within 24 hours) for supplying of furniture items, in case of dealers quoting for the project, current year authorization certificate from original manufacturer to be attached, also confirming that the delivery will be made as per the requirement of tender.
2	Manufacturers should be an ISO certified organization and considering growing concern on environment and human resource, the Furniture Manufacturer should also have Environmental Certificate. All these should be submitted with the Tender. The following supporting documents to be enclosed: ISO 9001:2015 (For Quality Management System-QMS), ISO 14001:2015 (for Environment Management System-EMS), ISO 18001:2007 (For Occupational Health and Safety Management System), ISO 50001:2011 (For Energy Management System for the entire organizations to manage energy).
3	Turnover of the company should be minimum 80 crores in each of last Five consecutive years. In case of dealer, Average turnover should not be less than 1.0 Cr in last Five preceding consecutive years. CA



	certificates have to be submitted.
4	Tenderer should not have been black listed. (Self-Certification is required regarding conformity of contract from any state Government, Central Government, any PSU, or any reputed institute and if found wrong, tender will be rejected).
5	Bidder should quote all the items as per the BOQ of tender, if any item is left unquoted the tender of that bidder will be summarily rejected.
7	Product sample should be arranged by the successful tenderer, if required within 8 days.
8	Any representative of the Office may visit the Manufacturing set up to verify the Manufacturing capabilities, testing methods, process of manufacturing <i>etc.</i> , to ascertain the technical specifications on the cost of the bidder if required.
9	The Manufacturer should have a Registered Office and GST Registration in the state of Madhya Pradesh. Proof to be submitted.
13	Factory/Manufacturing plant license to be enclosed in compliance to Green – GRIHA/ IGBC/ NBGC or any other Green building national /International standard.
15	Orders of furniture and Lab furniture to be submitted along with the tender: One order of 24 lac or two orders of 15 Lac and above within the last 2 financial years of different Government Departments (Situating in Madhya Pradesh) preferably at Gwalior.
16	ISO 50001:2011 – The manufacturer must have ISO 50001- Energy management systems.
18	Lab furniture's Welded cabinets should be third party tested for SEFA 10M by SEFA approved lab.
20	The Manufacturer/Products should be certified for being Environment Friendly- the manufacturer should have products which are certified for being environment friendly, which are important to confirm that the products that have been offered meet rigorous emissions standards-helping reduce indoor air pollution and the risk of chemical exposure while aiding in the creation of healthier indoor environments. GRIHA prefers such products in order to achieve green compliance.
22	Certification of Individual Furniture items should be submitted along with bid. Green, GRIHA, BIFMA Level Certificates, Indoor air quality, AIOTA certificates should be certified from the only BIFMA certified agency like SGS Global, NSF Certification LLC, Orion Registrar Inc., UL Environment, TUV Rheinland LGA, Intertak <i>etc.</i> ,

ITEM NO.7 SERVO-TYPE VOLTAGE STABILIZER FOR LIQUID NITROGEN

GENERATOR (FIRST CALL)

Topology : Microcontroller based
Capacity : 75 KVA 3 Phase
Input Voltage : 250- 470 V
Output Voltage : 415 +/- 1%
Efficiency : More than 98 %
Speed of Correction : > 8 V per Second.
Cooling : Oil Cooled with Oil
Metering : Digital
Protection : Overload/ Short Circuit Protection, High/ Low Voltage
Cut Off, Bypass arrangement Systems.

Type : Three Phase, Indoor, Unbalanced.
LED Indicators : Overload, Low Voltage, High Voltage, FaultLevel,
Input/ Output.

The Transformer Oil in the required quantity for stated voltage stabilizer should be supplied along with the voltage stabilizer without any additional cost.

Technology : Micro Processor Based Servo Controlled Voltage Stabilizer

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as per BIS 9815 : 1994 redifferenced 2009.

Testing : As per BIS 9815: Part 1
Frequency : 50 Hz.
Rate of Correction : 8V/ Sec
Response Time : Less than 10 milliseconds
Break down strength : 2500 Ac for 2 Min
Insulation Resistance (IR): More than 100 Mega ohms at 500 V DC.
Ambient Temperature : (-30° C to 55 ° C)
Duty Cycle : Continuous
The stated voltage stabilizer should be compatible with an existing LiquidNitrogen Plant.


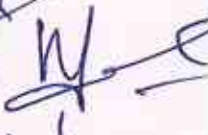



ITEM NO.8 AIR CONDITIONER (FIRST CALL)

Tonnage Category(TR)	2.0 T
BEE Star Rating***	5 Star
Rated AMP(Amp)	6.6
ISEER Value (W/W)	5.05
Rated Power Supply(V-Ph-Hz)	230 - 1 - 50
Air Flow Rate (CFM)	700
Indoor Noise Level(H/M/L)(db)	46/44/38
Fan Motor (Indoor)	4
Fan Motor (Outdoor)	1
Full Load Capacity(Watts)	6000
Half Load Capacity (Watts)	3000
Full Load Power Inputs (Watts)	1500
Half Load Power Input (Watts)	555
With Connecting Kit Pipe	
Moisture Removal Rate(Kg/Hr)	2.4
HD Filter	
Outdoor Unit	HYBRIDJET
Refrigerant	R32
Air Direction Control	
Security Lock	
IDU Temp Display	Hidden Display
Remote Control Type	LCD Remote
Remote Backlit	
Auto Off Timer	
Auto On Timer	
Refrigerant Leakage Detector	
Dry Mode	
Auto Fan Speed	
Intelligent CRF Alert	
Refrigerant Cooling PCB	
Wi Fi(Optional)	
Auto Cleanser(Self-Clean)	
KW display	KW display- Flexicool
Auto Mode	




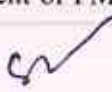


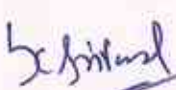

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Auto Restart
Temp Display On/Off
Stabilizer Free Operation(Even @48°C)
Double Drain(Easy Installation)
High Ambient Working(at 230V rated) 55°C even @195V
Sleep Mode

Technical Purchase Committee


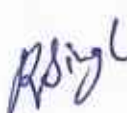




1. Dr. R. K. Pandya, Professor, Department of Plant Pathology, COA, Gwalior (Chairman) 
2. Dr. M. K. Tripathi, Professor & Head, Department of GPB& PMB&B, COA, Gwalior (Member) 
3. Dr. R.S. Sikarwar, Scientist (Senior Scale), Department of G&PB, COA, Gwalior (Member) 
4. Dr. Akhilesh Singh, Scientist (Senior Scale), Department of Agricultural Engineering (Member) 
5. Dr. Sushma Tiwari, Scientist, Department of PMB&B, COA, Gwalior (Member Secretary) 

Director Research Level Purchase Committee

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2. Dr. Anil Saxena, Comptroller, RVSKVV, Gwalior (Member) 
3. Dr. M. K. Tripathi, Professor & Head, Department of PMB&B, and Project In charge, RVSKVV, Gwalior (Member) 
4. Dr. Sushma Tiwari, Scientist, Department of PMB&B and Co-PI of the Project, Scientist/ Technical Expert, RVSKVV, Gwalior, (Member) 
5. Dr. Neeraj Hada, Scientist, Directorate of Extension Services, RVSKVV, Gwalior (Member) 
6. Dr. Y.D. Mishra, Directorate of Extension Services, RVSKVV, Gwalior (Member) 
7. Dr. S. C. Srivastava, TO, Krishi Vigyan Kendra, RVSKVV, Gwalior, Special Invitee (Member) 
8. DDO, Directorate of Research Services, RVSKVV, Gwalior (Member) 

External Technical Experts/ Advisors

1. Dr. Sharad Tiwari, Director, Biotechnology Centre, JNKVV, Jabalpur

2. Dr. GBKS Prasad, Professor of Biochemistry, Jiwaji University, Gwalior



Handwritten signature of Dr. GBKS Prasad in blue ink, written in a cursive style.

Director Research Services, RVSKVV, Gwalior



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25