

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

2A & 2B , Raja S.C. Mullick Road, Jadavpur, Kolkata-700032

NIT No. : IACS/SAIS/KDMR/2019-20/85

Date: 13/12/2019

Sealed tender in two bids system (technical bid and price bid) is invited from bonafide, resourceful and eligible manufacturer/exclusive distributor/vendors for **Low-current Probe Station**

Part-I (Technical Bid) of the tender should contain technical specifications in detail as well as commercial terms and conditions. Part-II (Price Bid) should clearly indicate group-wise price, if needed, as mentioned in the technical bid. The Technical Bid and Price Bid are to be submitted in separately sealed envelopes, distinctly marked accordingly and both to be put inside another envelope, that should be sealed and superscribed with tender notice no. and due date. The bidders may submit bids duly signed in their own letterheads.

Completed tender bids should reach the office of the **Registrar, Indian Association for the Cultivation of Science (IACS), 2A & 2B Raja S. C. Mullick Road, Jadavpur, Kolkata-700032** on or before the scheduled date and time specified below:

Tender Notice No.	NIT No. IACS/SAIS/KDMR/2019-20/85, Date: 13-12-19
Last date and time of submitting tender	January 06, 2019 upto 3.00 PM
Pre-bid meeting(date, time & place) to discuss technical specification	December 30, 2019 at 2.00 PM at Room No. 303 Centenary Building, IACS
Date and time of opening tender (Technical Bids)	January 06, 2019 at 3.30 PM
Place of opening tender	Room No.303, Centenary Building, IACS
Date and time of opening of Price Bid	The Price Bids of the bidders qualifying the technical bid will only be opened, the date of which will be intimated to the short-listed bidders at their email addresses. The rest of the bids will be rejected.
Contact	Email: Tel.+91 33 2473 4971 [Ext. 2153]

The technical bids will be opened first to judge/evaluate the technical specifications of the said instrument and thereafter the price bids of only technically qualified bidders will be opened.

Technical Bid Evaluation: The Technical Bids will be evaluated in the presence of the representatives of intending bidders who will be able to clarify technical aspects of their bids, if any, required by the Technical Evaluation Team.

Opening of price-bid: The Price Bids of the bidders qualifying the technical bid will only be opened, the date of which will be intimated to the short-listed bidders at their email addresses. The rest of the bids will be rejected.

Please note that IACS will not provide any accommodation or reimburse any expenses to any of the bidders for attending opening of technical bid.

Quotations received incomplete or beyond the stipulated time will be summarily rejected.

Bidders should submit their past experience for supplying and successful installation of similar units to other research Institutes/Universities/other organizations in India and abroad. Please provide documentary proofs of such successful installation and supportive documents that the instruments are running successfully.

1. TECHNICAL BID

The technical bid should contain technical specifications and should be kept in a separate sealed envelope duly superscribed as 'TECHNICAL BID' on the outer cover of the envelope as already detailed above. **It should be clearly mentioned on the envelope as "Technical Specification for Low-current Probe Station".**

Technical Specification for Low-current Probe Station :-

Sr. No.	Description	
1	Modular design for upgradability	• Dedicated upgrade path for lower signal levels.
2	Four Industry-standard positioners	• Designed for accurate and stable micromanipulators • Capable of measuring fA current • Magnetic base for safe operation
3	Probe arms	• Optimized for measurements down to fA levels • Optimized signal path for best accuracy • High-Performance triaxial probe arms with integrated cables • Compatible with PTT probes (included)
4	Universal probe platen	• Rigid and stable design • Compatible with probe card
5	40mm platen drive	• Flexibility for wafer-level and package test
6	Unique 200µm platen contact/separation stroke	• $< \pm 1 \mu\text{m}$ accuracy for repeatable contact quality • Convenient and easy to use
7	Vacuum Chuck stage & Probe station	• Quick, risk-free and convenient wafer loading • Chuck stage with 90mm roll out • Four micro-positioners with Linear X-Y-Z Travel. • High resolution probe arms with 2/4" travel in X&Y, 4-5 travel in Z • Vacuum Chuck 4" dia. For wafer 4" and less • Stage X-Y 4"-4" 20-micron Resolution or better • Theta Stage travel range: $\geq \pm 5.0^\circ$ degree fine adjustment or higher • Chuck Up/Down 4-5 mm • Probing Height Adjustable • Chuck biasing cable
8	Microscope and camera	• Accurate probe placement on small pads with 50 µm dimensions • C-mount included • Stereo Microscope with Zoom 1X~ 5X and magnification 10X~150X • LED light source for viewing features better than 1µm • System must include a port to attach a CCD camera (in future) to view the chip under test on a computer screen • CMOS digital Camera with 3 MP for imaging.
9	Microscope holder	The microscope should be attached to a stand/holder by which microscope can be rotatable to back side so that the space above the chuck and sample is accessible for external optical illumination system
10	Dedicated triaxial	• $< \pm 5 \mu\text{m}$ planarity

	chuck	• Supports single chip and wafers
		• Triaxial-isolated design for fA-level measurements
		• Integrated Force-Sense terminals
11	Integrated AUX chuck	• Ready for C-V calibration and verification
12	Chuck X/Y movement	• Precise X/Y positioning with < 5 µm resolution
		• Independent axis locks for easy linear navigation
13	Compact base with arm rest	• Small footprint [490mm x 490mm]
		• Convenient operation
14	Integration	The necessary connections/wire to integrate the probe station with Keithley 2834B two channel source-measure electrical measurement system
15	vacuum pump	Dry vacuum pump 6-9 lit/min suitable to system and all tubing and vacuum switches.
16	Vibration-isolation solution	• Ensures accurate contact and minimizes pad damage
17	Anti Vibration Table	• W=800mm, D=800mm, H=750mm
		• Adjustable two-chamber air damping system with resonance frequency of 2.5Hz
		• Automatic load leveling
		• Max. load capacity: 360kg
		• 1 pressure input regulator with guage
		• Storage shelf 550x320mm at rear bottom
		• Support arm systems optionally available
18	Dark Box	Shield Enclosure with Triaxial Feedthrough
		• Suitable for EPS150 and MPS150 (without laser cutter)
		• Light-tight and electromagnetically-shielded
		• Stable table required as base
		• Dimensions WxDxH: 750mm x750 mm x 820 mm
		• Includes test equipment interface with 1x12 mm RF and 6x triax-triax measurement and 1 x CV feedthroughs and feedthroughfor camera connection
		• Height (door opened): 1620 mm
		• Installation service strongly recommended
19	Micro Positioners	
	Probe technology	Use with DCP high performance DC probes
	Feature resolution	<1 µm
	Travel range (X/Y/Z)	12.5 / 12.5 mm / 5-12.5 mm
	Mounting	Vacuum, magnetic
	Electrical measurements	• Includes probe arms & accessories for standard DC probing, measurements in nA,pA,fA to mA range with cables. • The devices will be tested at dc and low frequencies. However, shielded cables with suitable connectors should be provided for low

		current (1 fA or less) / voltage (10 microvolt or less) measurements.
	Footprint (W x D)	90 mm x 60 mm or more
	Micro tips	Probe tips with 10, 5, 1 μ m tip radius (Qty 10 each).
	Application	IV/CV probing analysis

Additional Requirements:

- The probe station unit must be manufactured and integrated by the single vendor.
- Post sale service from the single vendor.
- There should be at least five probe station units of the vendor already installed in other labs in India and at least 20 units installed all over the world, maintaining a good track of functioning.
- The probe station system should be modular and upgradable.

Warranty: Minimum 1 year while 3 years extendable warranty is preferred.

Servicing facility within India is a must while service engineer stationed at Kolkata will be preferred.

A list of other places where the instrument has been installed should also be provided.

A compliance table (see below) must be prepared and submitted along with the technical bid.

Sr. No	Tender specification	Your offered instrument specification	Extent of compliance

Tender will not be accepted if the technical compliance chart is NOT provided following the above format.

2. PRICE BID

The financial bid indicating (item-wise) price for the item(s) mentioned in the technical bid should be kept in a separate sealed envelope duly super scribed as 'PRICE BID' on the outer cover of the envelop as already detailed above. Price bids of only technically qualified bidders will be opened and they will be intimated the date and time of the opening of price bid at their e-mail ids. Rest of the bidders will stand rejected.

PRICE: Price to be quoted on CIF Kolkata and also FOB or Ex-work basis or on Indian Currency.

3. BID SECURITY:

An Account payee Demand Draft of any of the Commercial Banks for Rs. 44,000 (Rupees forty-four thousand only) drawn in favour of "Indian Association for the Cultivation of Science (State Bank of India, Jadavpur University Branch, A/C No. 11079699211, IFSC: SBIN000093, MICR Code: 700002048)" is to be furnished by the bidders alongwith Technical Bid, except Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organisation or the concerned Ministry or Department.

Alternatively, the bidder shall have the option to furnish EMD in the form of Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any of the Commercial Banks. The Bid-Security should have at least 90 (ninety) days validity period beyond the final bid validity period.

In case of non-award of the work the Bid Security money would be returned to the unsuccessful Bidders.

4. PERFORMANCE SECURITY:

An Account Payee Demand Draft on any commercial bank of India or Bank Guarantee (BG) of any Commercial Bank preferably located at Kolkata of 10% of the order value in the name of “Indian Association for the Cultivation of Science” is to be furnished by the successful bidder as Performance security. Performance security money should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligations. Bid security money or EMD will be refunded to successful bidder on receipt of the Performance security money.

5. TERMS OF PAYMENT :

Payment will be made through irrevocable Letter of Credit in two instalments. 90% of the money will be released on submission of shipping of documents. Remaining 10% will be released after successful installation of the instrument.

6. GENERAL INSTRUCTIONS :

1. Validity of tender: Tender submitted should remain valid for at least six months from the date of opening the tender. Validity beyond six months from the date of opening of the tender shall be lapsed by mutual consent.
2. The tender should accompany a compliance chart.
3. Incomplete and conditional tenders as well as tenders received after the due date will be summarily rejected without assigning any reasons thereof.
4. At any time prior to the bid due date, IACS may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder during pre-bid meeting, modify the bidding documents. The amendment(s) will be notified on the institute website. Prospective bidders are advised to occasionally visit the website (www.iacs.res.in/tender) for any amendment.
5. Installation/Demonstration/Application training at site: Installation & user training at IACS, free of cost by the supplier.
6. Service facility: In India, preferably Kolkata, supplier should mention their details of service setup and man powers who are responsible for after sales support. Response time should be within 24 hrs.
7. The model number, make and a printed literature of the product should be submitted positively.
8. Proposed delivery schedule should be mentioned clearly.
9. Manufacturers / exclusive distributors / vendors should have history of supplying this type of instruments to this or other scientific organizations. Availability of a list in this regard would be preferred.
10. Authorized dealership certificate should be provided in case of principal manufacturing company is not quoting directly.
11. Guarantee certificate, users manuals etc. are to be handed over to the user after successful commissioning of the system.
12. In the event of date being declared a closed holiday for purchaser's office, the due date for submission of bids and opening of the technical bids will be the following working day at the appointed time.
13. In case of any dispute, the decision of IACS authority shall be final and binding on the bidders.
14. In case of any litigation the matter will be dealt within the jurisdiction of the High Court of Calcutta only
15. For any clarification regarding technical specifications, information etc., please send your queries to Dr. KDM Rao (trckdmr@iacs.res.in).
16. The authority of IACS reserves the right to reject any or all of the tenders received without assigning any reason thereof.

Acting Registrar