

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

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

NIT No. : IACS/SPS/SD/2018-19/89

Date: 18-01-2019

Sealed tender in two bids system (technical bid and price bid) is invited from bonafide, resourceful and eligible manufacturer/exclusive distributor/vendors for **Vacuum Cell for Optoelectronics**.

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 envelop, 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/SPS/SD/2018-19/89 Date: 18-01-19
Last date and time of submitting tender	February 12, 2019 within 03:30 pm (IST)
Pre-bid meeting (date, time & place) to discuss technical specification	January 29, 2019, 04:00 pm, IACS
Date and time of opening tender (Technical Bids)	February 13, 2019, 04:00 pm
Place of opening tender	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: sspsdd@iacs.res.in Tel. +91 33 2473 4971 [Ext 2141]

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 Vacuum Cell for Optoelectronics"**

A) Cryostat

1	Two Stage GM (Gifford-McMahon) Cycle/ Pulse Tube (PT) based Closed Cycle Cryo coolers based Closed Cycle Cryostat (Optical) for Temperature range: $\leq 10\text{K}$ and $\geq 350\text{ K}$ (at the sample stage)
2	Cryostat should be suitable for: a) Magneto-Optical Experiments b) Electrical measurements
3	Vibration at sample holder: The amplitude of vibration in axial direction should be ≤ 15 microns and in perpendicular direction should be ≤ 7 microns
4	cooling power: 2nd stage @ 50Hz $\geq 1.3\text{W @ }10\text{K}$. 1st stage @ 50Hz $\geq 14\text{W @ }77\text{K}$ Temperature Stability: $\geq \pm 0.05\text{K}$ with factory settings used for the temperature controller and optimized PID values; Time to reach base temperature from ambient temperature: ≤ 40 mins to 20K and ≤ 75 mins to base temp. Two temperature sensors: one calibrated sensor installed on 2nd stage of the cryocooler at the cold tip and another sensor (1.4K to 325 K) installed on the sample holder to precisely measure the sample temperature should be provided. 50-ohm control heater must be provided.
5	Sample space available should be at least ≥ 35 mm in diameter, and $\geq 35\text{mm}$ in height.
6	The system should have vacuum shroud and radiation shield. The outer diameter of the vacuum shroud should be around 50 mm.
7	Optical block should have a Uniformly loaded low stress window mounting arrangement for minimal stress on the window and the windows are O-ring sealed for easy changing and upgradation. Two number of high purity quartz windows should be provided. Radiation Shield Should be made of aluminium and should have 2 holes for use with Optical experiments. No Tools must be needed for Radiation Shield attachment. Sample Holder for Optical Measurements Transmission. 20/24 Dual Inline Pin Sample Holder compatible with wire bonding should be provided as an accessory. 8 Copper leads installed and thermally anchored with at least 4-inch free length should be provided for sample attachment. Wires from 8 resistivity pins should be wired to feedthrough electrical feedthrough for heater and temperature sensor wires.
8	Cold head control cable (3 meters), wrenches. Water-cooled compressor with full charge of high-purity helium gas; Helium hoses of at least 10ft length must be provided. Recommended maintenance interval: Cold Head: $\geq 13,000$ hours, Compressor: $\geq 30,000$ hours.
9	Evacuation valve (NW-25) and safety pressure relief valve should be provided.

B) Temperature controller

10	Two channel temperature controllers compatible to the cryostat should be supplied that has the following features a) Interconnecting cable to cryostat b) Two Channel Sensor Input c) Two independent heater output loops d) USB and GPIB (IEEE-488) parallel computer interfaces PID control zones. e) Autotuning PID f) suitable heater power
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C) Turbo molecular pump (along with a suitable dry backing pump):

11	Turbo molecular pump (along with a suitable dry backing pump) capable to reach $\leq 10^{-6}$ - 10^{-7} mbar from ambient pressure should be integrated with the cryostat. Specifications: a) Turbomolecular pump with suitable flange and having a pumping speed ≥ 35 liter/second capacity; b) Backed by suitable dry diaphragm backing pump; Backing Pump: - 1 m³ /hr c) Suitable mounting frame with rubber feet for easy handling; d) Wide range vacuum gauge (atmosphere to 10^{-8} mbar); e) Controller with integral air cooler, digital display of turbo speed and input for one vacuum gauge. f) Power Requirement: 100 - 240 VAC, 50/60 Hz g) All other suitable connecting vacuum accessories to connect the turbo pumping system with wide range gauge to the above close cycle cryostat must be quoted.
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D) Installation, service, and warranty:

12	Warranty for the cryostat for 3 years from the date of successful installation and commissioning. For turbo molecular pump, at least 1 year from the date of successful installation and commissioning.
13	The vendor must guaranty that all the spares parts for the offered assembly should be available for at least next 5 years.
14	The installation and commissioning of the entire cryostat including temperature controller, Turbo molecular pump must be done by factory trained engineer at free of cost.
15	After successful installation and commissioning of the system, the required operational training on the entire system must be provided on site to the deputed personnel at no additional cost.
16	The company must have a sales division in Kolkata, and service center in the eastern region of India. Please note that the party should have at least 15 nos. of cryostat installations across the country in last 10 years. All the major points mentioned in the specifications should be clearly mentioned in the brochure, so that that can be cross checked with the technical bid.
17	Payment terms: 90% of the entire amount through LC on shipment and balance 10% after installation through TT.

Warranty: For the cryostat for 3 years from the date of successful installation and commissioning. For turbo molecular pump, at least 1 year from the date of successful installation and commissioning.

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 basis.

3. BID SECURITY:

An Account payee Demand Draft of any of the Commercial Banks for Rs. 55,000 (Rupees fifty five thousandonly) 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 along with 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 Bankof 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 to 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 (sspsdd@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