

This is a Global Tender Enquiry, for the supply and installation of a Vacuum Soldering Bonder for CeNSE, IISc Bangalore.

## Section 1 - Bid Schedule

1	Tender No	IISC-CeNSE-VSB-01
2	Tender Date	23 <sup>rd</sup> June 2023
3	Item Description	Supply and installation of a Vacuum Soldering Bonder for CeNSE, IISc Bangalore
4	Tender Type	Two bid system (i) Technical Bid (Part A) (ii) Commercial Bid (Part B)
5	Place of tender submission	Chairperson Office First Floor Centre for Nano Science and Engineering Indian Institute of Science, Bangalore 560012
6	Last Date & Time for submission of tender	14 <sup>th</sup> July 2023
7	For further clarification	Prof. Prosenjit Sen Centre for Nano Science and Engineering Indian Institute of Science, Bangalore 560012  Email: <a href="mailto:prosenjits@iisc.ac.in">prosenjits@iisc.ac.in</a>

# Section 2 – Eligibility Criteria

Prequalification criteria:

1. The Bidder's firm should have existence for a minimum of 5 years. (Enclose Company Registration Certificate).
2. Quote should come only from Original Equipment Manufacturer (OEM) or their authorized distributor.
3. The quotations should be CIP-Bangalore Airport.
4. The bidder should sign and submit the declaration for Acceptance of Terms and Conditions as per -Annexure 4.
5. The Bidder must not be blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere. A declaration to this effect has to be given as per Annexure 3.

# Section 3 – Terms and Conditions

## A) Submission of Tender:

1. All documentations in the tender should be in English.
2. Tender should be submitted in two envelopes (two bid system).
  - a. Technical Bid (Part-A) – Technical bid consisting of all technical details and check list for conformance to technical specifications.

The technical proposal should contain a technical compliance table with 5 columns.

- I. The first column must list the technical requirements, in the order that they are given in the technical requirement below.
  - II. The second column should provide specifications of the instrument against the requirement. Please provide quantitative responses wherever possible.
  - III. The third column should describe your compliance with a “Yes” or “No” only. Ensure that the entries in column 2 and column 3 are consistent.
  - IV. The fourth column should state the reasons/explanations/context for deviations, if any.
  - V. The fifth column can contain additional remarks from the OEM. You can use this opportunity to highlight technical features, qualify response of previous columns, or provide additional details, compare your solution with that of your competitors or provide details as requested in the technical requirements table below.
- b. Commercial Bid (Part-B) – Indicating item wise price for the items mentioned in the technical bid, **as per the format of quotation provided in tender**, and other commercial terms and conditions.
3. The technical bid and price bid should each be placed in separate sealed covers, superscripting on both the envelopes the tender no. and the due date. Both these sealed covers are to be placed in a bigger cover which should also be sealed and duly superscripted with the Tender No, Tender Description & Due Date.
  4. The SEALED COVER superscripting tender number / due date & should reach Chairperson Office, Centre for Nanoscience and Engineering, Indian Institute of Science, Bangalore – 560012, India on or before due date mentioned in the tender notice. In case the due date happens to be holiday the tender will be accepted and opened on the next working day. If the quotation cover is not sealed, it will be rejected.
  5. All queries are to be addressed to the person identified in “Section 1 – Bid Schedule” of the tender notice.
  6. The quotations should be CIP-Bangalore Airport
  7. GST/other taxes, levies etc., are to be indicated separately. The BIDDER should mention GST Registration and PAN in the tender document.

8. If price is not quoted in Commercial Bid as per the format provided in tender document the bid is liable to be rejected.
9. The RFQ must include references of 3 previous installations, preferable in India. Please provide the names and contact addresses of the referees, so that the committee can contact them independently.
10. The purchase committee reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to the award of contract, without there by incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders.
11. Incomplete bids will be summarily rejected.

## B) Cancellation of Tender:

Notwithstanding anything specified in this tender document, IISc purchase committee, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights:

- a. To accept OR reject lowest tender or any other tender or all the tenders.
- b. To accept any tender in full or in part.
- c. To reject the tender, offer not confirming to the tender terms.

## C) Validity of the Offer:

The offer shall be valid 90 Days from the date of opening of the commercial bid.

## D) Evaluation of Offer:

1. The technical bid (Part A) will be opened first and evaluated.
2. Bidders meeting the required eligibility criteria as stated in Section 2 of this document shall only be considered for Commercial Bid (Part B) opening. Further, agencies not furnishing the documentary evidence as required will not be considered.
3. Pre-qualification of the bidders shall not imply final acceptance of the Commercial Bid. The agency may be rejected at any point during technical evaluation or during commercial evaluation. The decision in regard to acceptance and / or rejection of any offer in part or full shall be the sole discretion of IISc Bangalore, and decision in this regard shall be binding on the bidders.
4. The award of the contract will be subject to acceptance of the terms and conditions stated in this tender.
5. Any offer which deviates from the vital conditions (as illustrated below) of the tender is liable to be rejected:
  - a. Non-submission of complete offers.
  - b. Receipt of bids after due date and time and or by email / fax (unless specified otherwise).

- c. Receipt of bids in open conditions.
6. In case any BIDDER is silent on any clauses mentioned in these tender documents, IISc Bangalore shall construe that the BIDDER had accepted the clauses as of the tender and no further claim will be entertained.
7. No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.
8. Lowest bid will be calculated based on the total price of all items tendered for Basic equipment along with accessories selected for installation, operation, preprocessing and post processing, optional items, recommended spares, warranty, annual maintenance contract. The purchase committee is looking for the most cost-effective solution of obtaining a new tool. Vendors are encouraged to propose all avenues, including but not limited to buy back of the exiting tool, turnkey upgrade of existing tool or purchase of a new tool.

#### E) Pre-requisites:

The bidder will provide the prerequisite installation requirement of the equipment along with the technical bid. A floor plan should be part of the technical bid. A list of utility requirements should be part of the technical bid. The system should be compatible with 240±10V, 50 Hz single phase or 415±20V, 50 Hz 3 phase supplies. The MINIMUM sets of utility requirements needed should be provided in **Table 1**. If there are additional utility requirements, please include them in the technical bid. Please list connector types for all utilities.

#### F) Warranty:

The complete system is to be under warranty period of minimum 3 years (year wise breakup value should be shown in the commercial bid) Vendor should include cost of any spares as an optional item that are expected to be needed during the warranty period, including electronics, subcomponents, and software. Vendors can assume usage of 1000 hours/year for this calculation. If the instrument is found to be defective, it has to be replaced or rectified at the cost of the bidder within 30 days from the date of receipt of written communications from IISc, Bangalore. If there is any delay in replacement or rectification, the warranty period should be correspondingly extended.

#### G) Annual Maintenance Contract:

An annual maintenance contract for a period of at least 3 years post warranty should be provided as an essential optional item on completion of the warranty period.

The AMC costs will not be considered towards classifying the domestic nature (class 1 or class 2) of the vendor (see eligibility criteria in section 2).

## H) SPARES:

The Vendors have to provide detailed list of Spares and User Manual with Bill of Materials of all Parts in detail as per Spares Column with Manufacturer part Number, Qty, Availability of stock after 3 Years.

## I) Purchase Order:

The quantity of the items in tender is only indicative. IISc, Bangalore reserves the right to increase /decrease the quantity of the items depending on the requirement.

If the quality of the product and service provided is not found satisfactory, IISc, Bangalore reserves the right to cancel or amend the contract.

## J) Delivery, Installation and Training:

The bidder shall provide the lead time to delivery, installation and made functional at IISc, Bangalore from the date of receipt of purchase order. The system should be delivered, installed and made functional within 120 days from the date of receipt of purchase order. The supply of the items will be considered as effected only on satisfactory installation and inspection of the system and inspection of all the items and features/capabilities tested by the IISc, Bangalore. For acceptance, the vendor will have to demonstrate the technical specifications mentioned in the tender. After successful installation and inspection, the date of taking over of entire system by the IISc, Bangalore shall be taken as the start of the warranty period. No partial shipment is allowed.

The bidder should also arrange for technical training to the local facility technologists and users.

## K) Payment Terms:

Vendors should mention Payment terms. As per GFR no advance payment can be made to domestic vendors, unless an equal amount of bank guarantee is provided.

## L) Statutory Variation:

Any statutory increase in the taxes and duties subsequent to bidder's offer, if it takes place within the original contractual delivery date, will be borne by IISc, Bangalore subject to the claim being supported by documentary evidence. However, if any decrease takes place the advantage will have to be passed on to IISc, Bangalore.

## M) Disputes and Jurisdiction:

Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Bangalore, India.

## N) General:

1. All amendments, time extension, clarifications etc., within the period of submission of the tender will be communicated electronically. No extension in the bid due date/time shall be considered on account of delay in receipt of any document(s) by mail.

2. The bidder may furnish any additional information, which is necessary to establish capabilities to successfully complete the envisaged work. It is however, advised not to furnish superfluous information.
3. The bidder may visit the installation site before submission of tender, with prior intimation.
4. Any information furnished by the bidder found to be incorrect, either immediately or at a later date, would render the bidder liable to be debarred from tendering/taking up of work in IISc, Bangalore.

# Section 4 – Technical Specifications

The specifications have to be demonstrated during system installation and acceptance.

Sl. NO.	Description & Specifications		Whether Complied by the vendor (Yes/No)	Remarks
1	<b>Application:</b> This system is required for vacuum packaging under controlled inert gas environment with help of AuSn or other solders. Able to work with various semiconductor chip packages & flat substrates and circuits which includes semiconductor chips & package.			
2	Vacuum solder system should be capable for vacuum bonding under controlled inert gas environment.			
3	<b>The Vacuum solder system features:</b>			
3A	ESD safe and clean room compatible			
3B	Programming via touch Screen display (8 ") Programming via touch Screen display (8 "), storage of 99 programs available, each with up to 99 program steps			
3C	Graphical overview of process components			
3D	Digital manual integrated in the software			
3E	Capability to record the recipe data			
3F	Power monitoring to detect defective heating rods			
3G	Replacing necessary components at the end of lifetime			
3H	Tabletop or standalone Vacuum Solder system			
3I	Inter connection with the PC controller			
3J	Within a program step can be programmed to achieve a predetermined pressure, reaching a predetermined temperature with adjustable ramp or a waiting period			
4	<b>Technical Specifications</b>			
4A	Plate size	300 x 300 mm or more		
4B	Chamber height:	100 mm or more		
4C	Max. soldering temperature:	450 °C or more		
4D	Thermal uniformity process area	+/- 1% from actual temp or better		
4E	Heating- ramp in K/min	100K/min or higher		
4F	Water Cooling-ramp in K/min	100K/min or higher		



<b>4G</b>	Process atmosphere:	N2		
<b>4I</b>	Gas controlled by Mass flow controller (MFC) and monitoring by software			
<b>5</b>	Pump	Dual stage rotary vane vacuum pump with traps, exhaust filters and accessories need to be included		
		Chamber pressure of less than 0.1 mbar		
		Pumping speed 8m <sup>3</sup> /h or more		
<b>6</b>	Chamber	Push button automatic chamber locking system		
		Chamber cover with viewing window		
		Vacuum chamber with overpressure valve, relative pressure sensor, absolute pressure sensor and vacuum valve		
		Chilled water: cooling system for connection to an open water cooling		
<b>7</b>	Au80Sn20 - Preform -(Width: 2.54mm, thickness: 0.025 mm) length 5 mts			
<b>8</b>	Au80Sn20 - Preform -(Width: 2.54mm, thickness:0.050 mm) length 5 mts			
<b>A</b>	<b>Optional items</b>			
a	Cooling Water Recirculatory: Water Chiller with expansion tank, pump and compressor			
b	Flux-Trap with condensate trap and tempered vacuum chamber to avoid flux condensation on the chamber walls			
c	Process-Control via separate thermocouples			
d	Process atmosphere: N2H2 (95/5), with pressure regulator and gas monitoring, gas inlet through Mass-Flow-Controller			

#### Spares List Module Wise

S.No	Description	Cat. Number	Quantity



# Section 5- Technical Bid

The technical bid should furnish all requirements of the tender along with all annexures in this section and submitted to

The Chairperson,  
Attn: Prosenjit Sen  
Centre for Nano Science and Engineering  
Indian Institute of Science  
Bangalore – 560012, India

## Annexure-1:

### Details of the Bidder

The bidder must provide the following mandatory information & attach supporting documents wherever mentioned:

### Details of the Bidder

Sl. No	Items	Details
1.	Name of the Bidder	
2.	Nature of Bidder (Attach attested copy of Certificate of Incorporation/ Partnership Deed)	
3.	Registration No/ Trade License, (attach attested copy)	
4.	Registered Office Address	
5.	Address for communication	
6.	Contact person- Name and Designation	
7.	Telephone No	
8.	Email ID	
9.	Website	
10.	PAN No. (attach copy)	
11.	GST No. (attach copy)	

Signature of the Bidder

Name  
Designation, Seal

Date:

## Annexure-2:

Declaration regarding experience

To,  
The Chairperson,  
Centre for Nanoscience and Engineering,  
Indian Institute of Science,  
Bangalore – 560012, India

Ref: Tender No: XXXXXXXXXX

Dated: XXXXX

Supply and installation of Vacuum Soldering Bonder at CeNSE, IISc Bangalore

Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company / firm has --- years of experience in supplying and installing Vacuum Soldering Systems.

(Signature of the Bidder)

Printed Name

Designation, Seal Date:

## Annexure-3:

Declaration regarding track record

To,  
The Chairperson,  
Centre for Nano Science and Engineering  
Indian Institute of Science,  
Bangalore – 560012, India

Ref: Tender No: XXXXXXXX  
Dated: XXXXX

Supply and installation of Vacuum Soldering Bonder at CeNSE, IISc Bangalore

Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company/ firm is not currently debarred / blacklisted by any Government / Semi Government organizations / institutions in India or abroad. I further certify that I'm competent officer in my company / firm to make this declaration.

Or

I declare the following.

Sl.No	Country in which the company is Debarred. /blacklisted / case is Pending	Blacklisted / debarred by Government / Semi Government/Organizations /Institutions	Reason	Since when and for how long

(NOTE: In case the company / firm was blacklisted previously, please provide the details regarding the period for which the company / firm was blacklisted and the reason/s for the same).

Yours faithfully  
(Signature of the Bidder)

Name  
Designation, Seal

Date:

## Annexure – 4:

Declaration for acceptance of terms and conditions

To,  
The Chairperson,  
Centre for Nano Science and Engineering  
Indian Institute of Science,  
Bangalore – 560012, India

Ref: Tender No: XXXXXX  
Dated: XXXX

Supply and installation of Vacuum Soldering Bonder at CeNSE, IISc Bangalore

Sir,

I've carefully gone through the Terms & Conditions as mentioned in the above referred tender document. I declare that all the provisions of this tender document are acceptable to my company. I further certify that I'm an authorized signatory of my company and am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)  
Name  
Designation, Seal

Date:

## Annexure – 5:

Details of items quoted:

- a. Company Name
- b. Product Name
- c. Part / Catalogue number
- d. Product description / main features
- e. Detailed technical specifications.
- f. Remarks

Instructions to bidders:

1. The bidder should provide technical specifications of the quoted product/s in detail.
2. Bidder should attach product brochures along with technical bid.
3. Bidders should clearly indicate compliance or non-compliance of the technical specifications provided in the tender document.



# Section 6 – Commercial Bid

The commercial bid should be furnished with all requirements of the tender with supporting documents as mentioned under:

Addressed to

The Chairperson,  
Attn: Prosenjit Sen  
Centre for Nano Science and Engineering  
Indian Institute of Science  
Bangalore – 560012, India

S.No	Description	Cat. Number	Quantity	Unit Price	Sub total
1.	Essential items noted in the technical specification				
1.a	... (details of essential items)				
1.b	...				
2.	Optional items noted in the technical specification				
2.a	... (details of essential items)				
2.b	...				
3.	Accessories for operation and installation				
4.	All Consumables, spares and software to be supplied locally				
5.	Warranty (3 years)				
6.	AMC 3 years beyond warranty				
7.	Cost of Insurance and Airfreight				
8.	CIP/CIF IISc, Bengaluru				

Any additional items such as Spares and Hardware/PCB'S Likely to going Obsolete after the next 3 Years

S.No	Description	Cat. Number	Quantity	Unit Price	Sub total

# Section 7 – Checklist

(This should be enclosed with technical bid- Part A)

The following items must be checked before the Bid is submitted:

## 1. Sealed Envelope “A”: Technical Bid

1. **Section 5- Technical Bid (each page signed by the authorized signatory and sealed) with the below annexures:**
  - a. **Annexure 1: Bidders details**
  - b. **Annexure 2: Declaration regarding experience**
  - c. **Annexure 3: Declaration regarding clean track record**
  - d. **Annexure 4: Declaration for acceptance of terms and conditions**
  - e. **Annexure 5: Details of items quoted.**
2. **Copy of this tender document duly signed by the authorized signatory on every page and sealed.**

## 2. Sealed Envelope “B”: Commercial Bid

### **Section 6: Commercial Bid**

Your quotation must be submitted in two envelopes: **Technical Bid (Envelope A) and Commercial Bid (Envelope B)** super scribing on both the envelopes with Tender No. and due date and both of these in sealed covers and put in a bigger cover which should also be sealed and duly super scribed with Tender No., Tender description & Due Date.