Request for quote for the supply of a mechanical tester for biomedical devices to the Indian Institute of Science from domestic (India-based) manufacturers

Contents

This is a Request for Quote (RFQ) from domestic (India-based) vendors for the supply of a mechanical tester for biomedical devices.

Section 1 - Bid Schedule

1	Tender No	IISC/MT/KKC/25/01
2	Tender Date	15th July 2025
3	Item Description	Mechanical tester for biomedical devices
4	Tender Type	Two-bid system (i) Technical Bid (Part A) (ii) Commercial Bid (Part B)
5	Place of tender submission	Office of the Chair, Department of Materials Engineering, Indian Institute of Science, Bangalore 560012
6	Last Date & Time for submission of tender	6th August 2025, 5 PM IST
7	For further clarification	Prof. Kaushik Chatterjee Materials Engineering, Indian Institute of Science Bangalore – 560012, India. kchatterjee@iisc.ac.in

Section 2 – Eligibility Criteria

Prequalification criteria:

1. The Bidder's firm should have existed for at least five years. Bidders should enclose the Company Registration Certificate.

2. The Bidder should belong to Class-1 or Class-2 suppliers distinguished by their "local content" as defined by recent edits to GFR. They should mention clearly which class they belong to in the cover letter.
   a) Class-1 supplier: Goods and services should have local content equal to or more than 50%.
   b) Class-2 supplier: Goods and services should have local content equal to or more than 20 % and less than 50%.

3. The quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor.

4. The quotations should be on FOR-IISc Bangalore basis in INR only.

5. Bidders offering imported products will fall under the category of non-local suppliers. They cannot claim themselves as Class-1 local suppliers/Class-2 local suppliers by claiming the services such as transportation, insurance, installation, commissioning, training, and other sales service support like AMC/CMC, etc., as local value addition.

6. Purchase preference, as defined by the recent edits to GFR (within the "margin of purchase preference") will be given to the Class-1 supplier.

7. MSMEs can seek an exemption to some qualification criteria. IISc follows GFR2017 for such details.

8. The bidder should sign and submit the declaration for Acceptance of Terms and Conditions as per -Annexure 4.

9. 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 documentation in the tender should be in English.
2. Tenders should be submitted in two envelopes (a two-bid system).
    a. Technical Bid (Part-A) – Technical bid consisting of all technical details and checklist for conformance to technical specifications.

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

       I. The first column must list the technical requirements in the order given in the technical requirement below.
       II. The second column should provide instrument specifications 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 responses of previous columns, provide additional details, compare your solution with 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 the tender** and other commercial terms and conditions.

3. The technical bid and price bid should be placed in **separate sealed covers**, superscribing the tender description, tender no., and the due date on both envelopes. 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 should reach the Chair's Office, Department of Materials Engineering, Indian Institute of Science, Bangalore – 560012, India, on or before the due date mentioned in the tender notice. If

the due date is a holiday, the tender will be accepted 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. GST/other taxes, levies, etc., should be indicated separately. The BIDDER should mention GST Registration and PAN in the tender document.
7. If the price is not quoted in the Commercial Bid as per the format provided in the tender document, the bid is liable to be rejected.

8. The purchase committee reserves the right to accept or reject any bid and annul the bidding process and reject all bids at any time prior to the award of the contract without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected
9. bidder or bidders.

10. Incomplete bids will be summarily rejected.

B) Cancellation of Tender:

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

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

C) Validity of the Offer:

The offer shall be valid 60 Days from the commercial bid's opening date.

D) Evaluation of Offer:

1. The technical bid (Part A) will be opened first and evaluated.

2. Bidders meeting the required eligibility criteria 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. Prequalification of the bidders shall not imply final acceptance of the

Commercial Bid. The agency may be rejected at any point during technical evaluation or commercial evaluation. The decision regarding acceptance and/or rejection of any offer in part or full shall be the sole discretion of IISc Bangalore, and the decision in this regard shall be binding on the bidders.

4. The contract award 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 the due date and time 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 has accepted the clauses as of the tender, and no further claim will be entertained.

7. No revision of the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.

8. The lowest bid will be calculated based on the total price of all items tendered for the basic equipment, accessories selected for installation, operation, preprocessing and post- processing, optional items, recommended spares, warranty, and annual maintenance contract. The purchase committee seeks the most cost-effective solution for obtaining a new tool. Vendors are encouraged to propose all avenues, including but not limited to buy back of the existing tool, turnkey upgrade of existing to, l or purchase of a new tool.

E) Pre-requisites:

The bidder will provide the pre-requisite installation requirement of the equipment along with the technical bid.

F) Warranty:

The complete system has to be under warranty for a **minimum period of 1 year**.

The vendor should include the cost of any spares needed during the warranty period, including electronics, subcomponents, and software. If the instrument is defective, it has to be replaced or rectified at the bidder's cost within 30 days from receipt of written communications from IISc, Bangalore. If there is any delay in replacement or rectification, the warranty period should be extended.

G) Annual Maintenance Contract:

An annual maintenance contract for at least three years post-warranty should be provided as an essential, optional item upon completion of the warranty period.

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

H) SPARES:

Vendors must provide a detailed list of spares and a user manual with a detailed Bill of Materials for all Parts. It should include the Spares Column with the Manufacturer part Number, Qty, and availability of stock after 3 Years.

I) Purchase Order:

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

If the product and service quality is unsatisfactory, 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 the purchase order. The system should be delivered, installed, and functional within 120 days of receipt of the purchase order. The supply of the items will be considered as effected only on satisfactory installation and inspection of the system and the inspection of all the items and features/capabilities tested by the IISc, Bangalore. **For acceptance, the vendor must demonstrate the technical specifications mentioned in the tender**. After successful installation and inspection, the date of taking over the 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 for the local facility technologists and users.

K) Payment Terms:

100% payments (except AMC) will be released after completion delivery, satisfactory installation, and qualification, subject to TDS as per rules. AMC cost (if ordered after completion of the warranty period) will be released on a half-yearly basis at the end of each six months, subject to satisfactory services. The price basis must be on FOR-IISc Bangalore basis only. 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 the bidder's offer, if it takes place within the original contractual delivery date, will be borne by IISc, Bangalore, subject to the claim supported by documentary evidence. However, if any decrease occurs, the advantage will have to be passed on to IISc, Bangalore.

M) Disputes and Jurisdiction:

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

N) General:

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

2. The bidder may furnish any additional information necessary to establish capabilities to complete the envisaged work successfully. It is, however, advised not to furnish superfluous information.

3. With prior intimation, the bidder may visit the installation site before tender submission.

4. Any information furnished by the bidder found to be incorrect, immediately or later, would render the bidder liable to be debarred from tendering/taking up work in IISc, Bangalore.

Section 4 – Technical Specifications

The mechanical tester should include a Radial Force System and a Universal Testing machine. Both machines should be quoted as a package. The specifications for the systems are as below.

RADIAL FORCE SYSTEM

A Radial Force System for stent applications.	
1	**Load frame**
	The load frame should be specifically designed only for radial force application and should be simple to operate and easy to calibrate solution for radial force testing and should be the most durable with lowest friction
	Stepper motor motion system with encoder feedback providing resolution of 0.001mm and radial force capacity of 660N
	A sheet metal enclosure should house the radial compression station, and this should fit the tensile testing machine
	The temperature control system should allow temperature settings in the range of 20 Deg C to 45 Deg C for room temperature tests
	FORCE TRANSDUCER
	Precision force transducer with high accuracy USB signal conditioner/ convertor to provide stable, low noise force measurement
	Special force parameters to be displayed in real time or exported including Hoop Force, Surface pressure, Radial Length or hoop force per length and with selectable measurement units.
	Calibration pin and weight to be provided with machine for the calibration methods. Both diameter and force calibration to be completed within a minute.
	RADIAL COMPRESSION STATION
	Radial compression station for use with tensile testing machine with 16mm max diameter and with working length of minimum 60mm.
	Ball bearing motion to provide low friction, resulting in clear, repeatable radial force measurements of stents and other vascular devices.
	Rated Maximum radial force of 660N
	Dies to be made from hardened stainless Steel
	SOFTWARE
	Simple intuitive Radial Force Application software should be installed on a Windows PC/laptop to get valid test results.
	Calculation radial strength or chronic outward force according to ASTM F3067
	Selectable diameters profiles such as manual, ramp and saw tooth and arbitrary diameter sequences specified by operator should be possible
	Data should be capable to .csv files for analysis using spread sheet programs

ELECTROMECHANICAL UNIVERSAL TESTING MACHINE

Single Column Table Top Electromechanical Universal Testing Machine. The machine will be used for tensile and Flexural strength of materials.	
1	**Load frame**
	5kN, Electromechanical, Single Column, Table top and with single test zone - below the crosshead
	Maximum Crosshead travel: 730mm
	Height x Width x Depth: Not to exceed 1150mm x 500mm x 450mm
	Weight: Not to exceed 60 Kgs
	Noise at full crosshead speed at 2m radius: not to exceed 18dB
	Power: 230V, 1 Phase and 50Hz, power consumption not to exceed 550W +/-10%
	Machine should have built-in pneumatic distribution ports to provide local air supply to pneumatic grips.
	The machine should meet CE Compliance
	In-built controller in the load frame
	Data processing Rate: 168Mhz
	Data Acquisition rate at PC: 1000Hz
	External PC connection: USB
	Number of instrument device connections – external to be One
	Extension measurement
	Resolution 0.1 µm
	Accuracy +/- 10 µm
	Calibration standard ISO 9513
	Position control
	Test Speed: 0.0001-1000 mm/min upto 2.5kN; 0.0001-500mm/min upto 5kN
	Resolution: 0.1 µm
	Accuracy +/- 0.05% of indicated speed
	Return speed (post-test): 0.0001-1500 mm/min
	Crosshead positioning speed: 0.0001-1000 mm/min
2	**LOAD CELL**
	Strain Gage-based Load cell of minimum 500N capacity
	Accuracy: 0.5% of applied force across load cell force range (0.2% to 100%)
	Range: 0.2% to 100%
	Calibration standard: +/- 0.5% to ISO 7500-1 ASTM E4
3	**GRIPS/FIXTURES**
	Filament Grips: Should be fitted with rubber-faced jaws and spring-loaded to retain the specimen prior to applying the final gripping. Max. Capacity 100N Min. Load cell 10N Construction: Aluminium body

	Dimensions not to exceed: 85 mm long, each grip Weight not to exceed 100g
	Miniature Vice Grips Miniature vise clamp grip – general purpose tensile grip which uses a pivot action to initially grip the sample and a clamping screw to tighten the vise. Rubber faced jaws to prevent sample slippage. The design of the grip should allow easy and accurate setting of the distance between jaws. Max. Capacity 2kN (400 lbs) Min. Load cell 20N Dimensions not to exceed 80mm high Weight not to exceed 100gm
	Three Point Variable Bend Fixture The variable span three-point flexural test attachment should comprise the base unit with two adjustable support points of contact and one upper point of contact. A graduated scale on the main body of the unit allows accurate setting of the support span. Loading Bar (Length:50.8mm, Dia 05mm) x 3 nos Application: Polymers, composites, corrugated card, sheet materials Capacity 5kN or higher Min. Load cell 250N Construction Zinc plate & black passivate Dimensions 35-300mm variable span, diameter of point of contact Specimen dimension 50mm wide Weight not to exceed 9.75kg (base) / 1.5kg (top) Standard: ISO 178 ASTM D790 GB/T 9341
4	**Material Testing Software**
	Licensed windows 10 operating software with graphic user interface suitable to perform tensile test at room Temperature as per relevant ASTM standards.
	The software should be the latest Windows 10 version and should be upgradable to any new Windows version (Windows 11/12/….) for the NEXT 7 years from date of order at free of cost.
	Application software shall be provided with test control, data acquisition, data viewing, result calculation, report generation and plot options.
	Software shall be capable of continuation of interrupted tests.
	Software to acquire simultaneously data from load cell, extensometers, time of test duration, etc
	Should have a provision for defining limits for each transducer with rapid response to trips, load cells, overload etc
	Licensed version of Team viewer should be provided
	Additional SOFTWARE KEY FEATURES ● Test method library ● Test editor ● Tabbed test and recall area ● Output editor

	● Method editor ● Result editor ● Report consolidation ● Data importing
	If IISc purchases another UTM, then the same software should have the capability of controlling the new machine also. Implies perform multiple tests at one time, controlling and gathering test data from multiple machines.
	Software should have the capability of webcam recording feature of recording each and every test and replay the test.
	The software should have the feature of Touch screen enabled
	The software should have the facility of Multifaced security as that of the hierarchy of the QC laboratory
5	**Computer** The computer should consist of with the following minimum configuration. a) Make : HP/DELL/Lenovo b) Processor: Intel Core i7 Processor, 9th Gen 3.0GHz or better. c) Operating System: Windows 10 Professional (64 bit or more) latest licensed version d) RAM: 8GB (minimum), 1600DDR3 or better with expansion. e) Hard Disk: Minimum 1TB 7200 rpm SATA. f) Graphics card: Nvidia Quadro K1100M with 2GB video RAM or better g) Accessories: DVD/CD R/W, Optical mouse. h) Monitor Display size: Min 30 inch (Diagonal), antiglare i) Ethernet 10/100/1000 gigabit ethernet j) Minimum 2 USB ports and 1 VGA port. k) Web camera

Section 5- Technical Bid

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

The Chairperson,
Attn: Prof. Kaushik Chatterjee
Department of Materials Engineering, Indian Institute of Science, CV Raman Ave. Bangalore – 560012, India.

Annexures

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 an attested copy of the 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
Attn: Prof. Kaushik Chatterjee
Department of Materials Engineering, Indian Institute of Science, CV Raman Ave. Bangalore – 560012, India.

Ref: Tender No: XXXXXXXXX Dated: XXXXX

Dear Sir/Madam

I have carefully reviewed the Terms & Conditions in the above-referred tender. I hereby declare that my company/firm has years of experience in supplying and installing the proposed equipment.

(Signature of the Bidder)
Printed Name
Designation,
Seal
Date:

Annexure 3:

Declaration regarding track record

To,
The Chairperson
Attn: Prof. Kaushik Chatterjee
Department of Materials Engineering, Indian Institute of Science, CV Raman Ave. Bangalore – 560012, India.

Ref: Tender No: XXXXXXX
Dated: XXXXX

Dear Sir/Madam,

I have carefully reviewed the Terms & Conditions 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 am a 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
Attn: Prof. Kaushik Chatterjee
Department of Materials Engineering, Indian Institute of
Science, CV Raman Ave. Bangalore – 560012, India.

Ref: Tender No: XXXXXX

Dated: XXXX

Dear Sir/Madam,

I have carefully reviewed the Terms & Conditions 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 am 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. Bidder should provide technical specifications of the quoted product/s in detail.
2. Bidder should attach product brochures along with the technical bid.
3. Bidders should clearly indicate compliance or non-compliance with 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:

Addressed to

The Chairperson
Attn: Prof. Kaushik Chatterjee
Department of Materials Engineering, Indian Institute of Science, CV Raman Ave. Bangalore – 560012, India.

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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.	FOR IISc, Bengaluru				
8.					

Any additional items, such as Spares and Hardware/PCBs Likely to go obsolete after the next 3 Years

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

Section 7 – Checklist

(This should be enclosed with a 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),** superscribing on both the envelopes with, Tender description, 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.