

## Indian Institute of Technology Palakkad

भारतीयप्रौदयोगिकीसंस्थानपालक्काड

# STORES & PURCHASE SECTION

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Tender No. TENDER/2025-26/365
Date of Publication: 02-12-2025
Date/Time of Closing: 23-12-2025, 15:00 hours

Indian Institute of Technology Palakkad Invites Tender under Two-bid system for the:

# SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF RHEOMETER WITH ACCESSORIES

Conforming to the specifications as in BoQ Technical.

Tender Documents may be downloaded from the e-Wizard Portal <a href="https://mhrd.ewizard.in/">https://mhrd.ewizard.in/</a>. Aspiring Bidders who have not enrolled / registered in e-Wizard should enroll / register before participating through the website <a href="https://mhrd.ewizard.in/">https://mhrd.ewizard.in/</a>. Bidders are advised to go through instructions provided at "Procedure for Submission of E-tender". [Special Instructions to the Contractors/Bidders for the e-submission of the bids online through this e-Wizard Portal"].

Bidders can access tender documents on the website. For searching in the site, kindly go to Live Tenders option, Click "Advance Search" and select Department as 'IIT Palakkad'. Thereafter, Click on "Search" button to view all IIT Palakkad tenders. Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <a href="https://mhrd.ewizard.in/">https://mhrd.ewizard.in/</a> as per the timeline below.

No manual bids will be accepted. All tender documents including Techno-Commercial, Technical and Financial bids should be submitted in the e-Wizard portal.

S. No.	Events	Date and Time
1	Publication of the Tender Document	02-12-2025
2	Last Date/Time for submission of ONLINE Bids	23-12-2025, 15:00 hours
3	Opening of Technical Bids	23-12-2025, 15:15 hours

#### TERMS AND CONDITIONS

1 GENERAL (a) The responsibility of submission of the	bids on or before the last date
shall rest with the tenderer. The institute	will hold no responsibility for
the non-receipt of the bids or the bids	s received after the date/time
specified. Any bid received by IITPKD at	ter the bid submission deadline
prescribed by IITPKD, shall be rejected	and returned unopened to the
Bidder.	
(b) Canvassing or offer of an advantage or	
person with a view to influencing accepta	
the Laws of India. Such action will res	sult in the rejection of bid, in
addition to other punitive measures.	
(c) Each bidder shall submit only one bid, eith	-
a joint venture or as a member of the con	_
the partners in a joint venture or any	
consortium participate in more than on	·
individual and the partnership/consortiun	l/Joint venture) are mable to be
rejected.  (d) The hidder shall hear all costs associate	ted with the preparation and
(d) The bidder shall bear all costs associa submission of his bid and IITPKD shal	
liable for those costs, regardless of the co	•
process.	
(e) IITPKD will respond to any request for	r clarification or modification
of the Tender Document that are receive	
the deadline for submission of bids pre	escribed by HTPKD. For this
purpose, the prospective bidder(s) re	equiring clarification in the
Tender Document shall notify IITPKD	_
ONLY. Any such clarification, together	
the clarification had been sought, will	-
Portal ONLY. Deviations, if any, obse	•
submitted bids, from the Terms and	
Document will not be accepted by the Ir  (f) Except for any such clarification by the	
stated to be an addendum to the tender do	
IIT Palakkad, no written or oral con	
explanation by any other employee of ar	
of the Institute, shall be taken to bind or fe	-
(g) The bidder is expected to examine all	instructions, forms, terms and
conditions in the Tender Document. In	the event of discovery of any
missing pages, the bidder shall inform	m the same to the Section/
Department concerned. Failure to furnish	the information required by the
Tender Document or submission of a tender	
to the Tender Document in every respect	will be at the bidder's risk and
may result in rejection of the bid.	1 1 2
(h) The bidder shall not make or cause to be obliteration to the text of the Tender Docu	-
(i) The Supplier shall not, without the prior	
assign to any third party, the Contract or a	
2 COMPOSITION OF (a) The Tender Document comprises of:	r w. v.
THE TENDER Instruction to the bidders including te	rms and conditions
<b>DOCUMENT</b> 1. Technical Specifications (Annext	
2. Undertaking by the Bidder (Anne	
3. Fall Clause Notice Certificate (A	
4. Annexure regarding Blacklisting/	Debarment (Annexure-IV)

#### **DOCUMENTS** The Technical, Techno-commercial (Cover One), and Commercial **COMPRISING THE BID** Bid (Cover Two) shall be submitted ONLINE through the e-Wizard Bids submitted in any mode other than ONLINE will be rejected outright. Documents establishing the conformity of the terms and conditions of the Tender Document shall be provided along with the bid. The offer/bids should be sent only for a system or that is available in the market and supplied to a number of customers. A list of customers in India and abroad with details must accompany the quotations. Quotations for a prototype machine will not be accepted. Original catalogue (not any photocopy) of the quoted model duly signed by the principals must accompany the quotation in the Technical bid. No prices should ever be included in the Technical bid. Compliance or Confirmation report with reference to the specifications and other terms and conditions should also be obtained from the Information related to the agency/bidder such as photocopies of the Registration/PAN/GST/TIN shall be furnished. The technical bid should consist of all technical details along with commercial terms and conditions. No prices should be included in the technical bid. Mentioning of Prices in the Technical Bid shall lead to **DISQUALIFICATION.** Bidders who are bidding for this tender, 1) Should have implemented at least TWO ORDERS of Rheometer with Accessories during previous two financial years (2023-24 and 2024-25) from Centrally Funded Technical Institutes (IITs, NITs, IISc, IISER), DRDO, ISRO, CSIR labs or Government Firms in India. Copies of the most recent purchase orders and user certificates of successful implementation must be included. Copies of financial statements or evidence of turnover must be furnished. 2) Should have an Average Annual Turnover of Rs.80.00.000/-(RUPEES EIGHTY LAKH ONLY) during the last THREE financial years (2022-23, 2023-24, 2024-25). The bidder shall enclose the audited statements of the indicated financial years, which should have been certified by a Chartered Accountant or a Competent Authority. 3) Should submit a Digitally signed Tender Document in Cover One. MONEY EARNEST The bidder shall furnish EMD of Rs.80,000/- (Rupees Eighty Thousand **DEPOSIT (EMD) Only)** through online payment gateway in the E-Wizard. Bids not accompanied by EMD shall be DISQUALIFIED. The firms who are registered with National Small Industries Corporation (NSIC) / or Small Scale Industrial (SSI)/ Micro & Small Enterprises (MSEs) are exempted from submitting the EMD. NSIC / MSME registered bidders must submit a copy of a valid NSIC / MSME Registration Certificate for exemption of EMD. It will be applicable for those bidders who shall

for trading purposes.

produce their own goods or provide their own services, and not applicable

5 PERFORMANCE SECURITY	<ul> <li>The performance security shall be submitted within FIFTEEN DAYS of receipt of the material by the IITPKD. The successful bidder shall furnish the Performance Security equal to 5% of the order / contract value (excluding the value of annual maintenance charges). The Performance Security shall be valid all along the warranty period and shall extend up to SIXTY DAYS after the date of completion of warranty period. It shall be ensured by the successful bidder that the validity of the Performance Security submitted is extended depending on the date of commencement of the Warranty.</li> <li>The performance security shall be a bank guarantee/E-Bank Guarantee (in the format as provided) issued by the Indian Scheduled bank acceptable to the IITPKD or a Demand Draft favoring, INDIAN INSTITUTE OF TECHNOLOGY PALAKKAD payable at PALAKKAD.</li> <li>The performance security shall automatically become null and void once all the obligations of the Supplier under the Contract have been fulfilled, including, but not limited to, any obligations during the Warranty Period and any extensions to the period. The performance security shall be returned to the Supplier not later than fifteen (15) days after its expiration.</li> <li>Failure of the successful Bidder to comply with the requirements shall constitute enough grounds for the annulment of the award and forfeiture of the EMD, in which event the IITPKD may make the award to the next lowest evaluated bid submitted by a qualified Bidder or call for new bids.</li> </ul>	
6 BID PRICES AND CURRENCY	<ul> <li>Prices must be quoted separately for each equipment/item identified.</li> <li>Price quoted for equipment/items shall include all the costs associated with packing, local transportation from the point of clearance to IITPKD, insurance, loading, unloading and associated delivery charges. The delivery shall be on DOOR DELIVERY basis to the institute including its installation, commissioning, integration and validation. It is the sole responsibility of the supplier to ensure that the equipment is delivered on DDP mode to IIT Palakkad. An undertaking to this effect as in Annexure-II.</li> <li>Prices quoted by the bidder shall be fixed during the validity of the bid.</li> <li>Prices of the equipment/items shall be quoted in Indian Rupees (INR) / Foreign Currency.</li> </ul>	
7 LETTER OF CREDIT		

8	PERIOD OF VALIDITY	• For imported equipment, a Letter of Credit (LC) shall be opened for 100% CIP price on receipt of the acknowledgment of the purchase order. However, 80% of the LC amount only shall be released on proof of the shipment of the consignment with necessary documents to be provided in detail at the time of placing of the purchase order. Balance 20% of the LC amount shall be released upon the receipt of a performance security of 5% of the total value of the purchase order and installation, commissioning, integration, validation and installation report/certification jointly given by the end user and the supplier.  Any costs associated with the amendments made in the LC as per the request made by the Supplier s should be borne by the supplier.  Any fluctuation in rates / rate conversions arising due to the amendment requests made by the supplier shall be on the supplier and not on the institute.	
0	OF BIDS	<ul> <li>Bids shall remain valid for a period of 180 DAYS after the date of the deadline for submission of bids prescribed by IITPKD.</li> <li>If the deadline is extended due to unforeseen circumstances, the bid validity shall be deemed to have extended accordingly.</li> </ul>	
9	TIME FOR SUPPLY, INSTALLATION, COMMISSIONING AND VALIDATION OF THE EQUIPMENTS/ITEMS	<ul> <li>The Supplier shall supply the equipment/items within the period specified in the tender document i.e. within 6 to 8 WEEKS of signing the purchase order or within the period mutually agreed between IITPKD and supplier. All the equipment and accessories should be delivered at IIT Palakkad, Physics Lab, Saraswati Block, Sahyadri campus, Kanjikode, Palakkad – 678623, Kerala.</li> <li>The Supplier shall thereafter proceed with the installation, commissioning, integration and validation and demonstrate operational acceptance of the equipment/items within the period specified. The equipment/items shall be installed and commissioned by the successful bidder within 20 to 25 days from the date of its receipt.</li> <li>The tenderer should indicate clearly the time required for delivery of the item. In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.</li> <li>In the event of failure of supply of the item/equipment/items within the stipulated delivery schedule, IITPKD has all the right to purchase the item/equipment/items from other sources on the total risk of the Supplier under the risk purchase clause.</li> </ul>	
10	PRODUCT UPGRADES	The Supplier shall continue to support and maintain the version/model of the Equipment supplied by upgrading the software and the hardware as and when amendments are carried out in the existing version or the product is upgraded. Whereas upgrades to the software shall be supplied free of cost, the Supplier may charge for upgrade in hardware provided it is of major nature. An upgraded higher version of the instrument and software related with the instrument shall be supplied.	
11	PENALTIES	If the Supplier fails to complete any of the activities in accordance with the time specified for it, or any extension of time granted by IITPKD, Liquidated Damages Clause shall be invoked.	
12	UP-TIME GUARANTEE/ DOWNTIME PENALTY CLAUSE	<ul> <li>The Supplier should provide up-time guarantee of 95% [24 (hours) X 7 (days) X 365 (days)] basis during the warranty period.</li> <li>The Supplier should provide up-time guarantee of 95% (24 hours/day basis) both during warranty. If downtime exceeds the 5% limit, extension of the warranty period will be twice the excess down time period.</li> </ul>	
13	LIQUIDATED DAMAGES	If a firm accepts an order and fails to execute the order, in full or part, as per the terms and conditions stipulated therein, it will be open to the Institute to recover liquidated damages from the firm at the rate of 1% of the value of the undelivered goods per month or part thereof, subject to a maximum of 5% of the value of the undelivered goods. It will also be open to the Institute alternatively,	

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		to arrange procurement of the required stores from any source, at the risk and expense of the firm, accepted and failed to execute the order according to
		stipulations agreed upon. This will also entail the removal of the defaulters'
		name from the approved/registered list of Suppliers.
14	EFFECT OF FORCE	(a) If the Supplier is prevented, hindered, or delayed from or in performing any
14	MAJEURE	of its obligations under the Contract by an event of Force Majeure, then it
	WASECKE	shall notify the IITPKD in writing of the occurrence of such event and the
		circumstances of the event of Force Majeure within <b>FIFTEEN DAYS</b> after
		the occurrence of such event.
		(b) The Supplier, when affected by the event of Force Majeure shall use
		reasonable efforts to mitigate the effect of the event of Force Majeure upon
		its performance of the Contract and to fulfill its obligations under the
		Contract, but without prejudice to IITPKD's right to terminate the Contract.
		(c) No delay or non-performance by the Supplier caused by the occurrence
		of any event of Force Majeure shall:
		<ul> <li>Constitute a default or breach of the Contract;</li> </ul>
		<ul> <li>Give rise to any claim for damages or additional cost or expense</li> </ul>
		occasioned by the delay or non-performance.
		(d) If the performance of the Contract is substantially prevented, hindered,
		or delayed for a single period of more than THIRTY DAYS or an
		aggregate period of more than SIXTY DAYS on account of one or more
		events of Force Majeure, the IITPKD shall have the right to terminate the
L		Contract by giving a notice to the Supplier.
15	EXTENSION OF TIME	• The time limit for supply, installation & commissioning, integration &
	LIMITS FOR SUPPLY	validation shall be extended if the supply is delayed or impeded in the
	AND MAKING OPERATIONAL, THE	performance of any of its obligations under the Contract by reason of any of the following:
	EQUIPMENT	<ul> <li>Any occurrence of Force Majeure;</li> </ul>
	EQUITMENT	<ul> <li>Any other matter specifically mentioned in the Contract;</li> </ul>
		<ul> <li>By such period as shall be fair and reasonable in all the circumstances</li> </ul>
		and as shall fairly reflect the delay or impediment sustained by the
		Supplier.
16	GOVERNING LAW	(a) The Contract shall be governed by and interpreted in accordance with
	AND	the laws of India.
	SETTLEMENT	(b) Any dispute or claim arising out of/relating to this Contract of the
	OF DISPUTES	breach, termination or the invalidity thereof, shall be settled by the
		Hon'ble Courts of Justice at Palakkad.
		(c) The page number should be marked in all pages serially (including all
		supporting documents enclosed with the tender document) and the
		declaration for the same shall be submitted by the bidder as in
		Annexure-II.
		(d) IITPKD reserves the right to accept or reject any or all the tenders in
		part or whole or may cancel the tender at its sole discretion without
		assigning any reason whatsoever. No further correspondence in this
		regard will be entertained.

### AWARD OF CONTRACT

1	AWARD CRITERIA	<ol> <li>The Contract will be awarded to the bidder whose offer is technically compliant in all respects and whose financial bid is the lowest among all technically qualified bidders.</li> <li>The Institute reserves the right to buy different items/quantities from different bidders considering price of individual/group of equipment/items or any other factors as decided by the Committee.</li> </ol>
2	AWARD OF PURCHASE ORDER	<ol> <li>Prior to the expiration of the period of bid validity, IITPKD will issue the Letter of Intent / Purchase Order to the successful Bidder in writing.</li> <li>Any amendment(s) in the Purchase Order will be permitted within SEVEN DAYS of its issuance. No amendments will be permitted beyond this period.</li> <li>The Purchase Order will constitute the foundation of the Contract.</li> </ol>
3	CONTRACT AGREEMENT	<ul> <li>Within SEVEN DAYS of receipt of the Purchase Order, the successful Bidder shall sign and date its copy on each page and return it to the Purchaser.</li> <li>Copy of Purchase Order duly signed and dated by the successful Bidder on each page shall constitute the Contract Agreement.</li> </ul>
4	CONTRACT DOCUMENTS / AMENDMENT TO CONTRACT	<ol> <li>All documents forming part of the Contract (and all parts of these documents) are intended to be correlative, complementary and mutually explanatory. The Contract shall be read as a whole.</li> <li>The order of precedence of the Contract documents shall be as follows:         <ul> <li>Contract Agreement/Purchase Order</li> <li>All Forms/Annexures</li> <li>equipment/items and their requirement</li> <li>Supplier's Bid</li> <li>Tender Document</li> </ul> </li> <li>No amendment or other variation of the Contract shall be effective unless it is in writing, is dated, expressly refers to the Contract and is signed by a duly authorized representative of each party to the Contract.</li> </ol>

REGISTRAR

Name of the Item:	RHEOMETER WITH ACCESSORIES
Quantity:	1
Warranty Period:	3

## **TECHNICAL SPECIFICATIONS**

S.	Items	IIT PKD required Specification
No.		
1	Rheological measurements	<ul> <li>Controlled shear-stress</li> <li>Controlled strain mode</li> <li>Controlled shear-rate</li> </ul>
2	Motor type	Electronically commutated (EC) Drag Cup motor
3	Motor inertia	1.2 e-5 kgm <sup>2</sup>
4	Normal force range	0.001 N - 50 N or better
5	Normal force resolution	0.5 mN or better
6	Normal force response time	< 10 ms
7	Bearing type	Air bearing
8	Operating modes	Direct strain control, shear rate control, shear stress control
9	Minimum torque in rotation	3 nNm or better
10	Minimum torque in oscillation	1 nNm or better
11	Maximum torque	225 mNm or better
12	Torque resolution	0.1 nNm or better
13	Angular resolution	< 1.8 nrad
14	Angular velocity range	1 nras-1 to 500 rads-1 or better
15	Frequency range	1 μHz to 150 Hz or better
16	Gap resolution over full vertical lift range	0.1 μm or better
17	Angular resolution	< 1.8 nrad or better
18	Measurable vertical lift range	At least 230 mm
19	Vertical profiles	Fully configurable by speed and normal force
20	Temperature controller [All Peltiers should be easy Plug and Use type]	Peltier Plate Controller:  4. Operating temperature range: -5°C to 200°C or better  5. Heating rates: 30°C/min or better  6. Cooling rates: 30°C/min or better  The equipment shall be capable of automatic recognition of different Peltier temperature systems  The temperature controller should suit all plate geometries.
21	Temperature resolution	0.01°C or better
22	Temperature stability	Better than $\pm 0.1$ °C
23	Plate Geometries (All geometries should have auto-recognition sensors)	Parallel plates:

	<del>                                     </del>	<del>                                     </del>
		Cone-plates:  • 20 mm dia. with 1° cone angle (SS – 1 no.)  • 40 mm dia. with 4° cone angle (SS – 1 no.)  Suitable base plate/s for all the quoted geometries
24	Software requirements	A software interface that offers total flexibility of test set-up - from sequence driven Standard Operating Procedure (SOP) type functionality to fully customizable test design for advanced research capabilities, should be provided. Full-fledged software for the operation of rheometer and data analysis. Real-time display and storage of data
25	Software Options: Modes of analysis	Rotational and Oscillatory tests: Shear stress and shear-rate controlled viscometry Shear stress and deformation-controlled oscillation Creep test/creep recovery Relaxation Deformation ramp  Transient Modes: Constant stress creep and recovery, Automatic sensing of steady state during creep test, Stress relaxation  Other option: Model fitting - Time-temperature superposition - Averaging - Intersection point determination - minimum/maximum evaluation - Curve smoothing - Surface determination - Tangent fitting - Yes/No resp. True/False decision criteria - Calculate Value Calculation action - Statement of the distortion factor
26	Calibration standards	1 Pas Standard Viscosity Oil (100 ml). Standard Newtonian Material (UKAS certified) for the verification of rheometer. Standard oils should be certified for use within 12 months of the specified packaging date.
27	Desktop PC for the rheometer	Branded Desktop Computer with Windows 11 OS should be supplied along with the rheometer.
28	Air compressor	Air filter and a noise free (65-70 dB or low) air compressor compatible with the Rheometer should be provided. All the necessary tubes & valves should be supplied.
29	Warranty	The equipment shall be provided with onsite warranty of THREE YEARS comprehensive from the date of installation
30	Installation and demonstration	The equipment shall be installed and demonstrated at IIT Palakkad.

#### (a) General requirements:

- 1. The party should have previous experience in fabrication and supply of similar systems with equivalent specifications.
- 2. Parties should include relevant information of materials to be used, brand or make of items, technical details showing competitive nature of bought out items, fabricated items etc. to meet the specification in the quotes.
- 3. **Installation & Commissioning:** After installation, the party should demonstrate the capacity of the equipment. The supplier shall undertake entire responsibility for dispatch, installation of the equipment at our site, commission and demonstrate the performance of the equipment.
- 4. **Training at site:** After installation, representatives from the party should thoroughly train the users on the equipment and the technical aspects relevant to asphalt characterization.

- 5. Technical catalogue/leaflets, electrical schematic of all relevant instruments/control panels shall be supplied along with the item.
- 6. A user manual in English should be supplied along with the item.
- 7. **Warranty:** Equipment must have an onsite warranty of **THREE YEARS** comprehensive from the date of installation.
- 8. Application support: Party should have an application support in India
- 9. **Technical support:** Party should support the proposed facility in terms of accessories, spare parts and software & hardware upgradation whenever required.

#### <u>UNDERTAKING BY THE BIDDER</u> (TO BE SUBMITTED ONLY THROUGH ONLINE MODE IN APPROPRIATE FORMAT)

We here by accept all the Terms and Conditions of the Tender Document and strictly adhere to the same in the event of getting Purchase order. We also declare that the Technical and Financial Bids submitted by us has NO DEIVATION from the Tender Terms and Conditions.

We hereby accept that the PRICES OF THE EQUIPMENTS/ITEMS QUOTED ARE AS PER THE INCOTERMS 2022 - DDP MODE, IIT PALAKKAD AND CLAUSE NO.6 OF THE TENDER DOCUMENT.

We hereby undertake that there are \_\_\_\_\_ pages, serially numbered, in the submitted tender including the supporting documents. (Please serially number all the pages including blank page, if any).

Note: This letter should be on the <u>letterhead of the quoting firm</u> and should be signed by a Competent Authority.

ANNEXURE-III

# FALL CLAUSE NOTICE CERTIFICATE (TO BE SUBMITTED ONLY THROUGH ONLINE MODE IN APPROPRIATE FORMAT)

We have submitted our principal's exclusive authorization letter which is specific for this tender

This is to certify that we have offered the maximum possible discount to you in our Quotation No. \_\_\_\_\_ dated \_\_\_\_ (Please do not reveal the prices here, which will lead to outright rejection of your bid).

The prices charged for the Stores supplied under tender should under no event be higher than the lowest prices at which the party sells the items of identical description to any other Govt. organization/PSU's/Central Govt., /State Govt. Autonomous bodies/Central/state Universities/Central/State Educational Institutions, failing which the "FALL CLAUSE" will be applicable. The institute will look into a reasonable past period to ensure this.

In case, if the price charged by our firm is found to be more, **IIT Palakkad** will have the right to recover the excess charged amount from the subsequent/unpaid bill of the supplier.

<u>Note:</u> This letter of authority should be on the <u>letterhead of the quoting firm</u> and should be signed by a Competent Authority and having the power of attorney.

ANNEXURE-IV

# UNDERTAKING REGARDING BLACKLISTING / NON – DEBARMENT Tender No. \_\_\_\_\_

M/s. Indian Institute of Technology Palakkad Kanjikode, Palakkad, Kerala 678623.

We hereby confirm and declare that we, M/s \_\_\_\_\_ are not blacklisted/ De-registered / debarred by any Government department/ Public Sector Undertaking/ Private Sector/ or any other agency for which we have Executed/ Undertaken the works/ Services.

For Company Name and Seal Authorised Signatory

No.

Note: This letter should be on the <u>letterhead of the quoting firm</u> and should be signed by a Competent Authority.