

INVITATION FOR QUOTATION

Package Name: Axial Torsion Testing machine/shopping

DIC/UIET/2017

Date: 03/04/2017

To,

Sub: Invitation for Quotations for supply of Products

Dear Sir,

1. You are invited to submit your most competitive quotation[2 bid system(separate technical and price bid)] for the following goods with item wise detailed specifications given at Annexure I,

Sr. No	Brief Description	Quantity	Delivery Period(In days)	Place of Delivery	Installation Requirement (if any)
1	Axial Torsion Testing machine	1	120	University Institute of Engineering &Technology	Yes

2. Quotation,

- 2.1 The contract shall be for the full quantity as described above.
- 2.2 Corrections, if any, shall be made by crossing out, initialing, dating and re writing.
- 2.3 All duties and other levies payable by the supplier under the contract shall be included in the unit price.
- 2.4 Applicable taxes shall be quoted separately for all items.
- 2.5 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- 2.6 The Prices can be quoted in Indian Rupees or Foreign Currency.

3. Each bidders shall submit only one quotation with 2 bid system(separate technical and price bid)

4. Quotation shall remain valid for a period not less than **55**days after the last date of quotation submission.

5. Evaluation of Quotations,

The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which

5.1 are properly signed ; and

5.2 Confirm to the terms and conditions, and specifications.

6. The Quotations would be evaluated for all items together.

7. Award of contract:

The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.

7.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.

7.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.

8. Payment shall be made in Indian Rupees as follows:

Delivery and Installation - 90% of total cost

Satisfactory Acceptance - 10% of total cost

9. All supplied items are under warranty of **24**months from the date of successful acceptance of items.

10. You are requested to provide your offer latest by **17:00**hours on **16-04-2017**.

11. Detailed specifications of the items are at Annexure I.

12. Training Clause (if any) **yes**

13. Testing/Installation Clause (if any) **yes**

14. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.

15. Sealed quotation to be submitted/ delivered at the address mentioned below,

University Institute of Engineering and Technology, Sector-25, South Campus Panjab University
Chandigarh

17. We look forward to receiving your quotation and thank you for your interest in this project.

(Authorized Signatory)

Name& Designation

Annexure-I

S.No.	Item Name	Quantity	Specifications
1.	Axial Torsion Testing machine	1	Axial Torsion System Specification I. GENERAL The testing instrument shall consist of a compact single column test frame, a durable linear upto 400 N motor, integrated at least 1 Nm Torsion motor, a load cell, electronics controller and software that provide machine control, data acquisition and data manipulation for a wide variety of Axial Torsion applications. All of these components must be fully integrated and supported by the vendor. The test system similar to above configuration must have been supplied within India or as an International supply. II. SYSTEM SPECIFICATIONS This unit shall integrate the following major sub-systems into a complete operating system. The major sub-systems and their specifications are: A. LOADING FRAME i. The single axial loading frame shall be capable of cyclic fatigue, tension, compression. It should include a digital closed loop command and feedback motion control system with high performance electric linear motor. ii. The load frame should also have an integrated torsion motor for applying torque on the test specimen. iii. For lateral stiffness, robustness and experimental environment purposes, voice coil and electromagnetic motors cannot be utilized. iv. The Axial motor shall have upto $\pm 400\text{N}$ of load measuring capacity. v. The Axial motor shall provide stroke upto 40 mm in total of

			<p>displacement travel.</p> <ul style="list-style-type: none"> vi. The motor shall have displacement resolution of 100nm or better. vii. The torsion motor should be able to apply atleast ± 1 Nm torque on the specimen viii. The torsion motor should have 0.5° or better rotation resolution ix. Torsion motor speed should have a rotation speed of 100rpm(600 degrees/second) or higher. x. The motor must be optimized to generate the least amount of heat and the system should not have any cooling fans on the load frame. xi. The test system shall include ISO-approved emergency stop switch. For safety purposes, the system shall not restart the motors when the emergency stop button is released. xii. The load frame shall be coated with a glossy finish to enhance the clean-ability of the system between research experiments. xiii. The total weight of the load frame should be light in order to be easily moved in and out of the lab environment xiv. The axial speed should be upto 2000 mm/min and shall be set using the supplied software. xv. The operational frequency cyclic usage at least 5Hz. <p>B. LOAD MEASURING SYSTEM, ELECTRONICS, & SOFTWARE</p> <ul style="list-style-type: none"> i. Both Axial and Torsion load cells shall be strain gauge based with resolution of $\pm 0.1\%$ of reading or better. ii. To avoid expensive repairs and downtime, the tension/compression load cells shall have an overload capacity upto 150%(without permanent zero shift) of capacity. iii. Constant load option for a minimum of 2 hours duration. iv. The test electronics shall allow an Ethernet connection to connect to an external laptop. The data acquisition electronics should be designed to be located within the controller and must be close to the load cell. Controller must be properly shielded from the known electronic noise generated in the test frame. v. The electronics shall provide at least a 3 kHz control loop frequency. vi. The electronics shall have an Integrated power supply and signal conditioning which minimizes heat generation. vii. The electronics shall accept up to two encoder inputs which provides control capability to two motors. viii. The electronics shall have at least two load channel inputs. ix. The electronics shall have at least two control or sense bits. x. The electronics shall have at least one DAC channel. xi. The software shall provide an easy to use point & click user interface.
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			<ul style="list-style-type: none"> xii. The software shall provide a digital oscilloscope display with user defined channel, scaling, and export capabilities. xiii. The software shall provide the capability of controlling and monitoring the complete test system. xiv. The software should provide independent axial motor and torsion motor control. xv. Software should provide independent & fully synchronized motor control. xvi. The software should provide both load control & displacement control. xvii. The software shall be configurable for sine, square, ramp, and block waveforms. xviii. Integrated data acquisition shall be provided on control channels. xix. Limit monitoring and event logging should be a standard software feature. <p>C. GRIPS</p> <ul style="list-style-type: none"> i. GENERAL <ul style="list-style-type: none"> 1. Axial Torsion Grips should be able to apply simultaneous Axial load and Torsion load on cylindrical polymer specimens up to 3 mm in diameter and up to 50mm in length 2. Compression platen grips should be supplied that can apply simultaneous compression and torsion testing. Platens must be compatible with biomaterial specimens of up to 15 mm diameter and up to 5 mm thickness. 3. Grips should be supplied for tensile testing of foam or polymers for samples with thickness up to 4mm and width upto 8 mm and 70 mm length. 4. Bend Fixtures should be supplied for Three Point bend test of polymer specimens. The fixture should be able to accommodate specimens with a length up to 40mm, 20 mm width and 4 mm thickness. <p>D. Computer</p> <ul style="list-style-type: none"> i. Supplier must provide compatible computer for control, monitoring and logging data from the test system. <p>E. Optional accessories</p> <ul style="list-style-type: none"> i. Compatible oven with a temperature up to 100°C. ii. Compatible Saline bath chamber iii. Axial and Torsion Load Cell <p>III. SERVICEABILITY & TRAINING</p>
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			<ul style="list-style-type: none">i. Factory trained service engineers will install system on siteii. Factory trained engineers must provide training on the installed test systemiii. Supplier must provide two-year warranty for the supplied system <p>*Prices may be quoted in domestic or foreign currency</p>
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FORMAT FOR QUOTATION SUBMISSION

(In letterhead of the supplier with seal)

Date: _____

To:

Sl. No.	Description of goods (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs. _____

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. _____ (Amount in figures) (Rupees _____ amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of ———— months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name: _____

Address: _____

Contact No: _____