

अभियांत्रिकीअभिकल्पविभाग, भारतीयप्रौद्योगिकीसंस्थानमद्रास, चेन्नै

Department of Engineering Design, Indian Institute of Technology Madras

Limited Tender Reference No.: DEPT/ED/2018-19/07/001 Date: 12 July 2018, Due Date: 23 July 2018 @ 4.00 PM.

Subject: INVITATION FOR QUOTATIONS FOR SUPPLY OF PRESSURE- MAPPING SYSTEM (Quantity: 1 No)

Dear Sir/ Madam,

1. Quotations are invited in duplicated for the various item shown below over leaf/enclosed list.
2. The quotations are to be two parts – **One Technical and Commercial offer:** The two parts of the offer are to be clearly marked on the envelopes. The two parts of the offer in separate envelopes must be enclosed in the bigger envelope duly sealed and super scribed with reference number and date and due date must be addressed to the under signed so as to reach him on or before the due date stipulated above.
3. The Quotations should be valid for 60 days from the due date and the period of delivery required should also be clearly indicated.
4. **Local Firms:** Quotations should be for free delivery to this Institute. If quoted for Ex – Godown delivery charges be indicated separately.
5. **Firms outside Chennai:** Quotations should be for F.O.R Chennai / F.O.B. Chennai / CIF Chennai (Including Insurance and Freight Charges).If Ex-Works, Packing, forwarding and freight charges must be indicated.
6. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the quotations, wherever applicable.
7. The rates of Goods and Service Tax (GST) and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for GST will be admitted at any stage and on any ground whatsoever. **The taxes leviable should take into consideration that we are entitled to have concessional Goods and Service Tax applicable to educational institutions run with no profit motive for which a concession.**
8. Goods should be supplied carriage paid and insured.
9. Goods shall not be supplied without an official supply order.
10. **Payment:** Every short effort will be made to make payment within 30 days from the date of bill/acceptance of goods whichever is later.
11. The Warranty of the item should be at least 12 months.
12. The Guarantee period of the item may be indicated clearly.
13. IIT Madras is eligible for concessional rate of custom duty. Necessary certificate will be issued on demand. IIT Madras will make necessary arrangements for the clearance of imported goods at the Airport /Seaport. Hence the price should not include the above charges.
14. **Acceptance and Rejection:** - IITM has the right to accept the whole or any part of the Tender or portion of the quantity offered or rejects it in full without assigning any reason.
15. Any quotations received after the deadline prescribed above will not be accepted. The quotation (duly signed hard-copy) should be sent to the following address.

The Head
Dept of Engineering Design
IIT Madras
Chennai-36
Ph.No: 044 2257 4737 & 044 2257 5630

Specifications of Pressure mapping system:

The pressure mapping system should have the capability to provide real-time measurements of contact pressure distribution, contact area and contact force under dynamic conditions. The specifications and the key features of the setup required are enlisted below:

1. The system must be configurable and include *a sensing system, data acquisition electronics and processing and data analysis software.*

a. *Specifications of sensing system:*

Dimensions of sensing area	Length : 200 mm-300 mm Breadth : 200 mm-300 mm
Total Number of sensing points	>1000
Sensor thickness	≤ 0.6 mm
Scan speed required	10-100 Hz
Cable length desired	≥ 1.5 m
Approximate pressure range	0-500 psi
Resistance to liquid required	No
Spatial Resolution (Pitch)	≤ 7 mm
Temperature requirement	Suitable to ambient temperature
Brief description about the sensor required and its purpose of usage	<ul style="list-style-type: none">• A conformable sensor for grasping curved deformable objects such as tubes and bottles and analyzing the grasp stability in dynamic conditions.• The sensor must be reusable and long-lasting.

- b. Data Acquisition electronics should be compatible with a wide range of sensors, and the sensing data must be instantly relayed to the software on the PC via any suitable hardware or cable. The entire setup should be portable without any complex external wirings or hardware.
- c. The processing software must be equipped with a graphical user interface and statistical tools for visualizing and interpreting pressure distribution, contact forces and contact areas while performing experiments.

Spika Veda
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IIT Madras, Chennai-600 036.

2. The setup must include a *laptop* preloaded with the data acquisition and processing software and compatible with all requisite external hardware and electronics required to monitor the outputs of the sensor. The laptop should either meet or exceed the following specifications:


Processor (CPU): Intel Core i5-7200U

Operating System: Microsoft Windows 10 64 bit.

Memory: 8 GB DDR4 RAM

Storage: 1 TB 5400 rpm Hard Drive

Monitor/Display size: 15.6"


विभागाध्यक्ष / Head
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Additional Requirements:

1. Provide a proof copy of P.O along with contact information of the concerned scientist/ faculty in centrally funded technical institute to whom this device / equipment has been supplied.
2. The warranty of the above equipment should be 12 months.
3. Proprietary certificate from manufacture.
4. Quantity: One Number.

Shri Vee
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