



## **Tender Notification for the procurement of a Primary Standard Differential Pressure Calibrator**

### **To Whom It May Concern**

This is a RFQ (Request For Quote) for procurement of a Primary Standard Differential Pressure Calibrator for MEMS Packaging lab as part of a limited tender for the Centre for Nano Science and Engineering, IISc.

The Centre is a platform for interdisciplinary research in IISc and houses a 14000 sq. ft. clean room, state of the art Micro fabrication, Nano Characterization and a packaging facility, apart from lab and office space for students and staff. The Centre routinely gets requests from scientists all over Indian industry, academia and government organizations for Fabrication, Characterization, Packaging and Calibration activities. As a result, any tool in CeNSE receives significant exposure to scientific community at IISc and beyond. The vendors are requested to factor in the value of this exposure into their quotes.

### **Procedure:**

1. Vendors will be required to submit a technical proposal and a commercial proposal in **two separate sealed envelopes**. Only vendors who meet the technical requirement will be considered for the commercial negotiation.
2. **The deadline for submission of proposals is the 4<sup>th</sup> of Sep 2020, 5:30 pm Indian standard time.** Proposals should arrive at the Main office, GF-15 Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore, 560012, India by the above deadline.
3. The decision of purchase committee will be final.
4. The technical proposal should contain a compliance table with 4 columns in addition to the ones in the technical requirements table that has been included with this RFQ below. The compliance table should include all the items and in the same order. The first column should describe your compliance in a 'Yes' or 'No' response. If 'No' the second column should state the extent of deviation (please provide quantitative responses). The 'third' column should state the extent of the



deviation if any. The fourth column can be used to compare your tool with that of your competitors or provide details as requested in the technical requirements table below. In addition, you should include a soft copy in MS Word '.doc' format in a CD/pen drive.

5. Any additional capabilities or technical details, that you would like to bring to the attention of the purchase committee, can be listed at the end of the technical table.

6. Vendors are encouraged to highlight the advantages of their tools over comparable tools from the competitors.

7. If multiple systems can fulfill the requirements, vendors can submit multiple bids.

8. In the commercial bid, please provide itemized cost of the system and *required* accessories, such as software, power supply, etc.

9. As an option, please provide itemized cost for any *suggested* accessories/add-ons that may enhance the usability, capability, accuracy or reliability of the tool. Vendors are encouraged to quote for as many add-ons as their tool portfolio permits.

10. The quotes should be CIF Bangalore, India. So please include cost of shipping.

11. The proposals 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.

12. Any questions can be directed to Dr. Manjunath M, Centre for Nano Science and Engineering, Indian Institute of Science, Bangalore 560012, India. (manjunathm@iisc.ac.in)



### Technical requirements:

	<i>Description</i>	<i>Specifications of Primary Standard differential Pressure Calibrator</i>
1.	Major Application	Calibration of differential pressure sensors / transducers
2.	Standard	Primary Standard
3.	Pressure range	3 to 200 bar or better - Static; 2 sets for P1 and P2 Differential pressure – 5mbar to 4000 mbar
4.	Pressure medium	Mineral Oil lubricated; N <sub>2</sub> for pressurization
5.	Accuracy	+/- 0.015% or better: (Specify temperature range also)
6.	Mass set (Course)	For all combinations from 5 mbar up to 200bar with smallest step of 5mbar for dynamic. (Complete set)
7.	Trim-mass sets	Class F1 / M1
8.	Adaptors	M14X1.5 (Female), M10X1 (Female), 1/4" BSP (Female) – 2 sets each
9.	Calibration certificate	UKAS calibration certificate/Calibration Certificate traceable to international standards
10.	Safety Compliance	The system should mandatorily include all safety features and interlocks to protect the man power, property, system and electronics in case of power failure & component failure .
11.	Installation, training, warranty & maintenance,	Supplier should complete installation on-site, provide a minimum of 2 year warranty post installation and on-site training of up to 5 people. Appropriate documentation, users manual and service manual to be provided.
12.	AMC, etc	On all systems an annual maintenance contract should be included for the next 5 years that includes at least one maintenance visit and two emergency visits within 48 hours from the request per year as an option.
13.	Spares& consumables	Include spares for up to two years like 'O' ring kit, Mineral oil (4 Liters) etc.
14.	Others	The payment terms will be specified in the commercial proposal and is subject to negotiation.
15.		Please provide details of the number of trained personnel in India, number in the southern region who can service the machine.
16.		Please list a set of acceptance tests for on-site (vendor) inspection and after installation at IISc Bangalore.

(Prof. Rudra Pratap)