



Department of Electrical Communication Engineering  
Indian Institute of Science, Bangalore 560012, India

27<sup>th</sup> Dec, 2016

**To Whom It May Concern**

This is a RFQ (Request for Quote) for procurement of a **Cryostat for micro-Raman Spectroscopy System** (referred to as **Cryostat** in the RFQ) at the Department of Electrical Communication Engineering (ECE), Indian Institute of Science, Bangalore.

To the extent possible, the Cryostat price should be broken up into as many individual components as possible. This aids price comparison on commercial bids.

All interested vendors shall submit a response demonstrating their capabilities to produce the requested equipment to the Primary Point of Contact listed below.

Direct all questions concerning this acquisition to **Dr. Kausik Majumdar** at **kausikm@ece.iisc.ernet.in**.



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**Procedure:**

1. Vendors will be required to submit a technical proposal and a commercial proposal in **two separate envelopes**.
2. The deadline for submission of proposals is the 5<sup>th</sup> January 2016, 5 pm. Proposals should arrive at the office of **Dr. Kausik Majumdar, Department of Electrical Communication Engineering, Indian Institute of Science, India, 560012** by the above deadline.
3. The technical proposal should contain a compliance table that should describe your compliance in a “Yes” or “No” response against each of the items in the table listed in this RFQ. **If “No” the second column should state the extent of deviation. The “third” column should state the reasons for 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.
4. Items in addition to that listed in the technical table that you would like to bring to the attention of the committee can be listed at the end of the compliance table.
5. **Vendors are encouraged to highlight the advantages of their tools over comparable tools from the competitors.**



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**Technical Requirements: Please note that the requirements listed below are only guidelines. It does not disbar tools that do not meet the criteria listed. Vendors are requested to quote for tools that meet the criteria to the best extent possible and list deviations. Deviations are NOT an automatic reason for disqualification. They will be discussed by the technical committee prior to making an informed decision.**

**Tool Name: Cryostat for micro-Raman Spectroscopy System**

- (1) Air cooled closed-cycle cryostat with temperature range 3.2 K to 350 K
- (2) One optical window on top and at least four on sides, with top window working distance < 5 mm
- (3) Integration of the cryostat should be compatible with Renishaw micro-Raman system
- (4) Maximum peak-to-peak temperature variation allowed: +/- 10 mK. Provide sufficient supporting information.
- (5) Peak-to-peak sample stage vibration (xy) allowed: less than 5 nm. Provide sufficient supporting information.
- (6) Small sample drift while cooling down to 4.2 K. Please quote the actual drift.
- (7) Top optical window should allow light with wavelength range of at least:  $450 \text{ nm} < \lambda < 1700 \text{ nm}$ . Provide sufficient supporting information.
- (8) Electrical feedthrough with at least 24 pins
- (9) Cool down time from room temperature to 4.2 K – less than 2.5 hours
- (10) Positional flexibility of the cryostat is required so that one can put it on any part of a vibration isolation table, or from one table to another, as needed
- (11) Vacuum pump should be included
- (12) The system should include the user and system calibration thermometers



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Clauses	
1.	Operating system should be specified and if not Windows 10 duration of support for older versions and cost of upgrades to newer versions should be included in the commercial bid
2.	Monitors should be 19" (diagonal) LCD monitors or bigger.
3.	Please include options currently available that can be added on in the future.
4.	<b>Training and Installation:</b> Onsite installation and training should be quoted.
5.	<b>Warranty and AMC:</b> Warranty period and cost of AMC beyond warranty period should be included in the commercial bid.
6.	Please include standards to be used for calibration of tool parameters.
7.	<b>The cost of shipping up to CIP Bangalore should be included. IISc will help with customs clearance at Bangalore Airport. Please include your payment option.</b>
8.	<b>Please list a set of acceptance tests for on-site (vendor) inspection and after installation at IISc.</b>
9.	Spares for up to one year should be included.
10.	The delivery time should be indicated in the quote.
11.	A set of basic tools required for performing routine maintenance. A tool cart that can be locked and that can accommodate these tools should be provided.
12.	The payment terms will be specified in the commercial proposal and is subject to negotiation.
13.	Please provide details of the number of trained personnel in India, number in the southern region or in Bangalore who can service the machine.

On behalf of the technical committee,

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