

Indian Institute of Technology Kanpur

Department Mechanical Engineering

**Enquiry for an active damping device with embedded sensor**

Enquiry Number: IITK/ME/ML/2017-18/ADD

Enquiry date: 20-04-2017

Original closing date: 12-05-2017; Extended Closing date: 01-06-2017

Sealed quotations (in two separate envelopes marked separately as "Technical Bid" and as 'Financial bid' are invited as per the specifications and terms and conditions listed below.

Quantity required: 1 active damping device with embedded sensor + 1 set of electronics (amplifier/power supply etc.)

**Specifications for the actuator, and scope of supply:**

- Force constant: 20 N/A ( $\pm 20\%$ )
- Moving mass: 2.2 kg ( $\pm 20\%$ )
- Suspension damping:  $\zeta = 0.15$  ( $\pm 20\%$ )
- Moving mass stroke: 2 mm ( $\pm 20\%$ )
- Resonant frequency: 8.4 Hz ( $\pm 20\%$ )
- Max dimensions: 115 mm (diameter) x 150 mm
- Total weight of the device: < 3.5 kg
- Operating temperature: 0 – 40 °C
- Internal sensor measuring range: 20 m/s<sup>2</sup> ( $\pm 20\%$ )
- Mounting: clearance holes on the flange
- Device should be supplied with magnets (with a threaded hole) for mounting
- Active damping device must be accompanied by its rack with 2-channel Controller and Current Drive Board
- Electronic Enclosure must be with Power supplies, ADD sensor interface, 2-Channel Current Drive Board, mains filter, switch and fuse, and 2-Channel Analog controller implementing velocity feedback (This controller should be able to be disabled/bypassed for user external controller implementation, and user must have access to sensor output and current drive input through standard BNC connectors)
- All necessary cables should be supplied with the device
- Actuator operational manuals must be supplied with the actuator

**Terms and Conditions:**

- Maximum education discount, if any should be offered
- Validity of quotation should be at least for 30 days
- The price quoted should be for delivery at Kanpur, India.
- Terms and conditions for the payment, including the banker's name of the principal and the account number
- Proprietary certificate, if relevant, should be provided.
- Delivery must be within 12 weeks from issuance of purchase order/indent
- The institute reserves the right of accepting and rejecting any quotation without assigning any reason.
- The indenter reserves the right to cancel the tender without being answerable.
- The Technical Bid should contain detailed technical specification of the product being offered and should not mention any price.
- The Financial Bid should include the detailed price quotation clearly including the cost of the equipment, taxes, service charges if any, shipping and handling charges.

Kindly submit the Technical and Financial bids in separate sealed envelopes addressed to:

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