



Department of Electrical Engineering, Indian Institute of Technology, Delhi

Hauz Khas, New-Delhi -110016, India

NIQ no. IITD/EE/PLN03-BEEN

Due Date: **15.9.2012, 5 PM**

Notice inviting quotations for an Optical Table with Vibration Immunity via Active Damping Control

Sealed quotations are invited for an optical table with vibration immunity that is achieved via active monitoring and control of the optical table damping performance. The purchase will be made through a two part bidding process. Technical and Financial bids have to be made separately. Complete technical information should be provided along with the Technical bid. Please refer to the page on Terms and Conditions for details on how and when to submit the Technical and Financial bids.

Required Specifications for the Optical Table with Vibration Immunity via Active Damping Control

- 1) Length, width, & thickness of optical table should be 8 feet, 5 feet, & 12 inches respectively.
- 2) The mounting holes should be 1/4-20 holes on 1 inch grid.
- 3) The working surface should be 400 series ferromagnetic stainless steel.
- 4) The flatness of the surface should be ± 0.004 inch, over 2 feet square.
- 5) The top and bottom skins should be 3/16 inch thick with integrated damping layer.
- 6) The optical table should have broadband damping, with a constrained layer core, damped working surface and composite edge finish.
- 7) Maximum Dynamic Deflection Coefficient should be 0.4×10^{-3} .
- 8) Maximum Relative Motion Value should be 3.0×10^{-9} inches.
- 9) Maximum Deflection Under Load should be 5.0×10^{-5} inches ($< 1.3 \times 10^{-3}$ mm).
- 10) Minimum Frequency Response should be 210 Hz.
- 11) The optical table should have the following bandwidth for (A) Monitoring vibration: 10-820 Hz and (b) Structural damping: 80-400 Hz
- 11) The optical table should have the following Output: BNC output with sensitivity of 30V/(mm/s), Frequency range of 18-820V, Measurement range of 0-0.16mm/s
- 12) The optical table should have a USB 2.0 computer interface.

Asst. Prof. A. Dhawan
(Principal Investigator)

Terms and Conditions

1. Please submit the TECHNICAL and FINANCIAL bids in separate sealed envelopes. Mark the two envelopes clearly as "Technical Bid" and "Financial Bid" respectively. Both the sealed envelopes should be sent in a single sealed envelope, clearly marked as "Quotations for an Optical Table with Vibration Immunity via Active Damping Control". The quote should reach the following address on or before **15.9.2012, 5 PM:**

Dr. A. Dhawan
Block II, Room 216,
IIT Delhi, Hauz Khas,
New Delhi, 110016, India

2. Please quote prices at FOB New Delhi, inclusive of all taxes and duties.
3. Quote should be in Indian Rupees for Indian agents, or in foreign currency, for foreign agents, and needs to be valid for at least three months.
4. Attach all the technical literature and a list of similar installations done in India.
5. If the quote is being submitted by a representative of the manufacturer, a valid agency-ship or dealership certificate authorizing the agent to quote to IIT Delhi on behalf of the manufacturers should be enclosed.
6. Complete set of manuals for the operation of the equipment should be given.
7. Clearly specify the installation requirements – such as space, power, frequency, environment etc.
8. If the item quoted is proprietary in nature, please enclose proprietary certificate from the principals stating, "Certified that _____ is a proprietary of M/s _____ and no other manufacturer makes this item."
9. Please attach a signed and stamped compliance chart for the specifications. The format of the compliance chart is attached to this document.
10. Please specify all of your terms and conditions clearly, including delivery period.
11. Preferred modes of payment for foreign agents are through letter of credit, or as payment on delivery. For Indian agents, typically payment is on delivery.
12. The Institute reserves the right to accept or reject any or all quotations without assigning any reasons thereof.

Asst. Prof. A. Dhawan
(Principal Investigator)

Compliance Chart

	Parameter	Requirement	Model Spec	Complies
1	Length	8 feet		
2	Width	5 feet		
3	Thickness	12 inches		
4	Mounting Holes	1/4-20 holes on 1 inch grid		
5	Working Surface	400 series ferromagnetic stainless steel		
6	Surface Flatness	±0.004 inch, over 2 feet square		
7	Top and Bottom Skins	3/16 inch thick with integrated damping layer		
8	Broadband Damping	Constrained layer core, damped working surface and composite edge finish		
9	Maximum Dynamic Deflection Coefficient	0.4×10^{-3}		
10	Maximum Relative Motion Value	$<3.0 \times 10^{-9}$ in.		
11	Deflection Under Load	$<5.0 \times 10^{-5}$ in. ($<1.3 \times 10^{-3}$ mm)		
12	Minimum Frequency Response	>210 Hz		
13	Bandwidth	Monitoring vibration: 10-820 Hz and Structural damping: 80-400 Hz		
14	Input / Output	BNC output with sensitivity of 30V/(mm/s), Frequency range of 18-820V, Measurement range of 0-0.16mm/s		
15	Computer Interface	USB 2.0		