

CORRIGENUDM – 1

Department of Aerospace Engineering

Extension of bid submission date:

The due date for the submission of bids has been extended to 15/03/2021 @ 3 PM & the technical bid opening is 15/03/2021 @ 4 PM.

Changes in technical specification:

TECHNICAL SPECIFICATIONS

2 No.s Shakers with control panels

I.	<u>SHAKERS (2 Nos.)</u>	
1.	Nominal Force	Sine: 1000 Kgf or more Random: 800 Kgf or more Shock: 2000 Kgf or more
2.	Frequency Range of Operation	5 Hz to 3200 Hz
3.	Max Displacement (Bare Table)	≥50 mm Peak to Peak (Operational)
4.	Max. Velocity (Bare Table)	≥1.8 m/s
5.	Max. Acceleration (Bare Table)	≥75 g peak (Sine)
6.	Payload Capacity	≥200 Kg
7.	Isolation & Trunion	Shaker should have rigid mounting, without air bellows, and with provision to lock the shaker at vertical, horizontal and at a 45° angle.
8.	Air Cooling Unit	Air cooling system as required, along with an Acoustic silencer and flexible hose pipe to be provided for cooling of shaker.
II.	<u>DIGITAL SWITCHING POWER AMPLIFIER</u>	
1.	Self Air-cooled solid state, PWM switching type, variable-field-power-supply, Touch Screen based front-panel user-interface, 32-Bit microcontroller based logic unit for system diagnostics and trouble-shooting colored TFT screen for alphanumeric display of Current, Voltage, Temperature, Run time and System interlocks. User configurable interlocks should also be available.	
2.	EMI Shielding, protection and interlocks	Amplifier console should be EMI shielded along-with a 3 phase line filtering full featured control panel. Interlocks: The following interlocks to be provided for safety of the vibrator system and the indicators to be provided on the power amplifier. Protection: Amplifier should have appropriate standard safety interlocks and monitoring. Also provide environment safety compliance certificates for the equipment.
3.	Coupling	AC & DC Coupling
4.	Variable Field	Provision should be available in the Amplifier console for power-transformer and related circuits for varying the Field power supply to the shaker to utilize low-power mode operations.

III.	MIMO CONTROLLER: CRYSTAL/ M+P/ DATA PHYSICS/ VRC/ LMS Controller with the following specifications	
1.	System shall be PC (Windows) based latest suitable computer for the controller with, appropriate processor and memory requirements for the MIMO controller software	
2.	8 Channel MIMO Controller for operation of dual shaker with 90° Phase Shift.	
3.	Coupling	AC, DC
4.	Ethernet	100Base-T Ethernet/ RJ 45 connector
5.	Software packages	Software must enable Sinewave control or random control, and also enable recalibration
IV.	<u>PIEZO-ELECTRIC ACCELEROMETER USED : 2 Nos.</u>	
1.	Make	PCB/ Endevco/ B&K/ Dytran
3.	Sensitivity	10 mV/`g' or better
5.	End Connector	10-32 microdot-BNC type on both ends
6.	Connecting Cable	5 m length or more (Low-noise)
V.	<u>STRINGER: 2 Nos.</u>	
1.	First end	10-32 UNF – 28
2.	Second end	M10
3.	Length	180mm to 200mm
4.	Material	MS
VI.	<u>ADAPTER: 2 Nos.</u>	
1.	First end	10-32 UNF – 28
2.	Second end	M10
3.	Material	SS

<u>VII. GENERAL CONDITIONS</u>	
1.	Bidders should QUOTE strictly in accordance with the requirements. Deviations if any from the specifications given above, which provides improvement in the functioning of the above item/equipment shall be clearly brought out with their advantages.
2.	Bidder should have supplied minimum 5 systems of 1000 Kgf or higher rating, working for 03 years in institute of National importance, PSU, or premier research institutes in India. List of Purchase orders or supply references, Contract details & supply/ installation date etc. to be provided along with Technical Bid.
3.	The firm should be ready to make a technical presentation with documentary evidences for Technical Evaluation Committee and demonstration of same or higher capacity system anywhere in India, at the time of evaluation.
4.	Quotation for 2 years standard warranty + 1 year optional warranty.
5.	Installation/Commissioning to be done at IITM.
6.	Should provide list of spares and their cost.
7.	Quote for AMC after warranty period as an option

8.	Compliance Statement of the technical specification of the offered equipment with printed literature for all items must be enclosed with the technical bid.
9.	The makes / brand and name and address of the manufacturer, Country of Origin, Country of Shipment are to be mentioned.
10.	System should work for an Ambient temperature of 20 to 45 ⁰ C.