

भू-तकनीकी अभियान्त्रिकी प्रयोगशाला  
जानपद अभियान्त्रिकी विभाग  
भारतीय प्रौद्योगिकी संस्थान  
कानपुर -208016 (उ.प्र)



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No.: CE/GTE/PG/2017  
Dated: 05/09/ 2017

M/S

Subject: Quotation for the supply of "BLOCK VIBRATION TEST SETUP".

Dear Sirs,

We would like to purchase following Block vibration test setup for my project work.  
Following are the technical specifications.

**PART- 1- Block Vibration Test Equipment as per IS 5249 portable- QTY -01**

The Control Panel

Input : 415 V, 3Ph. 50 Hz.

Capacity : 2.2 KW

Output Frequency : 0 to 50 Hz. Variable (in steps of 0.1Hz)

Speed Range : 120 RPM to 3000 RPM

Indication on screen : Vibration Frequency: 0 to 50 Hz.

: Vibration Displacement: 0 to 2000 microns (cal. From acceleration)

: Vibration Velocity

: 0 to 200 mm/sec (cal. from acceleration)

: Vibration Acceleration: 0 to 160 m/sec<sup>2</sup> (sensed using accelerometer)

Timer : 0 to 10 minutes programmable process timer

Interface/Display : PC based software for easy control and Monitoring

**Location : Room 101-105, Western Lab. Extension Building**

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**PART- 2 - "EXCITER" : QTY -01**

Unbalance mass Exciter: Suitable to generate vertical vibration

Input: 440 V. 3 Ph. 0 to 50 Hz. through control Panel.

Power rating: 2.2 KW

Output Frequency: 2Hz to 50 Hz. Variable through controller

Centrifugal Force: 2000 Kgf. Maximum at 45 Hz

**PART- 3 - DATA ACQUISITION SYSTEM WITH HARDWARE AND SOFTWARE WITH PROGRAM - QTY - 01 EACH**

**A.) Dynamic signal acquisition module complete with following operating software and programs:**

Input Characteristics

Number of channels.....4 No

ADC resolution .....24 bits

Type of ADC .....Delta-sigma (With analog prefiltering)

- 102 dB dynamic range,
- Anti-aliasing filters
- Software-selectable AC/DC coupling, AC-coupled (0.5 Hz)
- Software-selectable IEPE signal conditioning (2 mA)
- Smart TEDS sensor compatibility
- Above 50kS/s per-channel maximum sampling rate,  $\pm 5$  V input
- Operating temp 0 to 60 °C
- Should compatible with mentioned Accelerometer (Details describe below).

**Location : Room 101-105, Western Lab. Extension Building**

## B.) Accelerometer

Performance:

Sensitivity ( $\pm 20\%$ ) 500 mV/g

Measurement Range  $\pm 10g$

Frequency Range ( $\pm 3$  dB) 30.0 to 1,80,000 CPM

Resonant Frequency  $\geq 1500$  kcpm

Broadband Resolution (1 to 10,000 Hz) 300  $\mu g$

Non-Linearity  $\pm 1\%$

Transverse Sensitivity  $\leq 7\%$

Temperature Range: -65 to 200 °F

Please send your offer for the above mentioning the following:

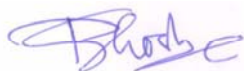
1. Cost of the software/Hardware including 1 year warranty with all calibration charts and complete installation, demonstration at IIT Kanpur.
2. Validity of the quotation should be at least 90 days.
3. Technical specifications in detail with operating manuals.
4. Delivery time.
5. Educational discount applicable.
6. Payment terms.
7. Proprietary Certificate, if applicable.
8. Any other relevant details.

Kindly arrange to send the quotation(s) with detailed specifications of the item in a sealed envelope to the given address, cited above, so as to reach us on or before the **closing date 25/09/2017**.

The undersigned reserves the right to accept the offer in part or full or reject without assigning any reason.

Thanking you,

Sincerely



(Priyanka Ghosh)