

**INDIAN INSTITUTE OF TECHNOLOGY KANPUR**  
**Department of Earth Sciences**

**Enquiry No: ES/DEPTT/SM/2016-2017/06**

**Date: 10.06.2016**

**Subject: Quotation for supply of Servo controlled Compressing Testing Machine.**

With reference to the subject mentioned above, you are invited to submit the quotation in a sealed cover in order to reach us by June 21, 2016 in the form of a hard copy to the address mentioned below. If you have any question please call Dr. Santanu Misra at 0512-2596812, email: [smisra@iitk.ac.in](mailto:smisra@iitk.ac.in).

**The prospective suppliers are required to send quotation in two parts in sealed envelopes, as "Technical Bid" and "Financial Bid".** The Technical Bid should contain detailed technical specification of the product being offered and should not mention any prices. 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. **The two separate and sealed envelopes should be clearly marked appropriately as "Technical Bid" and "Financial Bid". Kindly write the inquiry no on the top of envelop.**

**Terms and Conditions:-**

1. Maximum education discount, if any should be offered.
2. Validity of quotation should be at least for 60 days
3. Prices should be on CIF and FOB separately (if imported)
4. Prices should include the installation and training cost.
5. Normal payment terms for the Institute will be applicable (90% on delivery of the items and the remaining 10% after satisfactory installation/ inspection).
6. Quotation should carry proper certifications like agency certificate, proprietary certificate, etc.

**Technical Specification for Servo controlled Compressing Testing Machine:-**

- a. ASTM D2938 reference standard
- b. Both load and displacement controlled operation
- c. 500 kN load cell with 0.1% accuracy and calibration certificate from authorized agency
- d. Displacement range (piston stroke): 50 mm
- e. Displacement resolution: 0.1 micron in the range of 10 mm
- f. Displacement accuracy: 0.1%
- g. Minimum displacement rate: 0.01mm/sec
- h. Vertical distance from upper to lower platen: 390 mm
- i. Horizontal depth of working area: 250 mm
- j. Platen dimension (circular or square): 140 mm diameter or arm length
- k. Supported by real time data acquisition software and recording (24 bit analogue resolution)
- l. Hydraulic servo power pack specifications -
  - Max. working pressure: 300 bar
  - Max. Oil delivery: 10LPM
  - Oil Tank capacity: 150 Ltrs.
  - Hydraulic ports for connection of test frames
  - Oil flow control via servo-controlled proportional valve
  - Oil water cooling system with forced ventilation
  - Operating temperature range for servo valve: -29° C to 135°C
  - Burst pressure: 250% max supply pressure
  - External Leakage: zero
  - Vibration: 30g, 3 axes
  - Fluid cleanliness level per ISO 4406:1999: Mn. 16/14/12 &

- recommended 14/12/10
  - Hysteresis not be more than 3.0%
  - Threshold not be less than 0.5%
  - Supply Pressure: Constant
- m. Hardware and controlling unit specification –
- Robust, Stand alone, low power data logger with USB memory stick support & built in support.
  - Analog Resolution: 24 bit
  - Inbuilt RTC for the real time in standalone mode
  - Easy Configurable Windows Based Software to configure the
  - DAQ through PC.
  - Stand Alone & Real Time Data Acquisition, Keypad has capability to configure the system.
  - LCD display with 4 line 20 characters with back light
  - Working range of load control 0.1 to 1% of full scale
  - Working range of displacement control 1 micron to 100 micron per sec.
  - Operating Temperature range: -45°C to 70°C.
  - Display functions – channel data
  - Inbuilt battery for real time clock
  - Accepts input as analog voltage in the range of  $\pm 2.5V$ .
- n. Ensure well-managed and –protected shipment to IIT Kanpur from the manufacturing station
- o. Please mention about warranty, servicing and tech-support.

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