



भारतीय प्रौद्योगिकी संस्थान मद्रास, चेन्नै / 600 036
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CENTRAL ELECTRONICS CENTRE

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प्रो. वी. जगदीश कुमार
Prof. V. Jagadeesh Kumar
अध्यक्ष/Head

दिनांक/Dated: **22/04/2016**

INVITING QUOTATIONS FOR FORCE TESTER (Push & Pull)

Ref.No.

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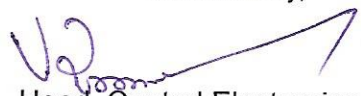
DUE DATE: 06.05.2016

To,
The Party Concerned

Dear Sirs,

1. Quotations are invited in duplicate for the **Force Tester (Push & Pul)** in Two Bid System (specification attached).
2. The Quotations are to be in **two bid system** as: Technical bid and Commercial bid. Two parts of the offer are to be clearly marked on the envelopes. The two parts of the offer in a separate envelop must enclosed in the one bigger envelop duly sealed and superscribed with reference number and due date and, should be addressed to the undersigned so as to reach him on or before the due date stipulated above. A blank price quote (identical to the Commercial bid with numbers removed) should be enclosed with the Technical Part.
3. The Quotations should be valid for Ninety days (90 days) from the due date and the period of delivery required should also be clearly indicated.
4. If the item is under DGS&D Rate contract No. and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the Rate contract price (Please note that we are not Direct Demanding Officers). If so please send copy of the RC.
5. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples if called for, should be submitted free of charges, and collected back at the supplier's expenses.
6. Local Firms: Quotations should be for free delivery to this Institute. If Quotations for Ex-Godown delivery charges should be indicated separately.
7. Firms Outside Madras : Quotations should be for CIF/F.O.R. Madras. If CIF/F.O.R. consignor station, freight charges by passenger train / lorry transport must be indicated. If Ex-Godown, packing, forwarding and freight charges must be indicated.
8. The rate of sales / General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales / General Taxes will be admitted at any stage and on any ground whatsoever The taxes leviable should take into consideration that we are entitled to have concessional Sales Tax applicable to non Government Educational Institutions run with no profit motive for which a concession. Sales Tax Certificate will be issued at the time of final settlement of the bill.
9. In case of import, the insurance & Freight charges should not exceed 6% of FOB value. You are requested to quote FOB price as well as CIF, CHENNAI mentioning Freight & Insurance charges separately. No Ex-works pricing is considered.
10. **No Advance Payment will be made for Indigenous purchase.** 100% Payment against Delivery on satisfactory installation for local purchase can be agreed to. For Imports normally payment will be made by Letter of Credit only (**Terms 90 % Payment will be released against dispatch of shipping documents and 10 % will be released after satisfactory installation**). Sometimes The Rule 159 GFR may be allowed (i.e.) 30 % Advance Payment against B.G. (Bank Guarantee) and 70 % Payment after supply (All the B.G. Charges will be borne by the supplier only). **Demurrage charges (if any) will be borne by the supplier & it will be deducted from the balance 10%.** Initial opening of Letter of Credit charges will be borne by us. If any amendment is requested for, the charges for the amendment will be borne by the supplier only. Hence, care should be taken in all respects before opening of Letter of Credit.
11. Goods should be supplied carriage paid and insured.
12. Goods shall not be supplied without an official supply order.
13. Payment: Every attempt will be made to make payment within 30 days from the date of receipt of bill/acceptance of goods, whichever is later.

Yours faithfully,


Head, Central Electronics Centre

अध्यक्ष / Head

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Central Electronics Centre

OFFICE COPY



Technical Specification – Force Tester (Push & Pull)

The test system should consist of a Modular extruded aluminium single column, rack and pinion mechanism, crosshead travel with lever movement along with provision to mount Digital Force gauge. It should consist of force and displacement measurement system and should have following features

- Adjustable upper and lower travel stops
- Spring loaded lever allows repeatability testing upto 40mm displacement
- Lockable thumbwheel for fine adjustments.
- Possibility to attach 1) force gauge with built-in sensor
2) Loadcell (Force sensor) with external force display unit -
Mounting holes for test stand fixing

Specification of Test stand

1. Machine Capacity in N : 500N
2. Max. Effective travel from base plate : 250mm
(without gauge and accessories)
3. Column to gauge load shaft clearance [throat depth] : 75 mm
(depending on the size of the force gauge)
4. Lever travel rate : 50 mm/revolution
5. Operational column height : 500mm

Specification of Force gauge

Range of force in N	0.2 to 2	0.5 to 5	5 to 50	50 to 500
Force gauge resolution	0.0001	0.001	0.01	0.1
Force measurement accuracy	$\pm 0.5\%$ <i>Full scale</i>	$\pm 0.5\%$ <i>Full scale</i>	$\pm 0.5\%$ <i>Full scale</i>	$\pm 0.5\%$ <i>Full scale</i>

Specification for Displacement measurement

Displacement Range in mm	100 mm
resolution	1 micron
Accuracy	10 micron

Jigs & fixtures required:

1. Conical tip
2. Notched tip
3. Small hook
4. Flat head
5. Grip for fine wires
6. Heavy duty tensile grip
7. Compression plates
8. Extension shaft



अध्यक्ष / Head
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