



No.MBD/Gau/HQ-RC(21)/2011/3618-25
Government of India
Central Water Commission
Middle Brahmaputra Division

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Dated : 27 . 09 .2011

NOTICE INVITING QUOTATION

The Executive Engineer, M.B. Division, Central Water Commission, Guwahati on behalf of President of India invites quotations in sealed cover from manufacturers / authorized firms/dealers/suppliers for Total Station with the following specifications. The quotations will be received upto 15:00 hrs on 18/10/2011 2011 and will be opened on the same day at 16:30 hrs. in presence of quotationers or their authorized representatives who may desire to be present at the time of opening the quotations.

SPECIFICATIONS OF TOTAL STATION

1. **Telescope**
 - i. Image - Erect
 - ii. Magnification $\geq 30X$
 - iii. Field of view $\geq 22m @ 1000 m$
 - iv. Minimum focus distance $\leq 2.0 m$
 - v. Resolving power $\leq 2.5''$
2. **Angle measurement**
 - i. Tilt compensation method – dual axis
 - ii. Tilt compensation range $\geq 3''$
 - iii. Angle accuracy $\leq 2''$ horizontal and vertical
 - iv. Displayed resolution (Least count) $\leq 1''$
3. **Distance measurement**
 - i. Range (20 km visibility) $\geq 1500 m$ with 1 prism & $\geq 3000 m$ with assembly of 3 prisms.
 - ii. Accuracy (in static mode) $\leq (5 mm + 3 ppm \text{ of distance})$
 - iii. Resolution (Least count) $\leq 1 mm$
 - iv. Measurement time $\leq 5 s$
 - v. Prism –Retro reflective type
4. **Optical plummet**
 - i. Magnification $\geq 2.0 x$
 - ii. Focusing range ≤ 0.5 to $\geq 2 m$
 - iii. A small Bull's eye Bubble on alidade.
 - iv. Two Electronic bubbles 30' sensitivity at right angles to each other on display panel.
 - v. One Circular Bubble on Tribrach.

5. **Key board and display** – Alpha Numeric keyboard on both sides (identical). Display: 1/4 VGA (320*240 pixels), graphic LCD, colour, illumination, Touch screen Keyboard: (function keys, alphanumeric keys), Angle display: 360° ' " , 360° decimal. Readable under field light conditions. Marking on keys are clear and non-removable. Graph of entire survey displayed on screen of Total Station with Zoom & Pan facility.
6. **Pressure & Temperature sensors** – In built Temperature & pressure Sensors for measurement and display of instant atmospheric temperature and pressure in SI system of unit.
7. **Accessories** – Total station should have following original accessories showing company's mark on it in strong carrying case with Data Transfer Cable. Data Transfer Software. Two rechargeable Batteries, One Charger, One CD containing Instruction Manual. Two Single prism with Target Plate and one wooden stand Range, Two pole, Two display, Two Detachable Tribrach, lens cover set, cleaning brush, cover of durable plastic, shock absorbing carrying case with shoulder strap etc in complete.
8. **Data storage** (with pc-software for data retrieval, presentation and archiving)
 - Capacity ≥ 10000 points on board memory or more
 - SD Card/CF card slot with 256 MB or more
 - RS232/USB Interface
9. **Focusing Mode:**

Three Focusing Mode viz.

 - b) Auto Focus mode
 - c) Power Focus mode
 - d) Manual Focus mode
10. **Physical**
 - i. Weight ≤ 10 kg
 - ii. Temperature range ≤ 0 to $\geq 55^{\circ}$ C fully operational
 - iii. Humidity 0 to $\geq 90\%$ RH
 - iv. Protection splash waterproof and dustproof
11. **Power**
 - i. Batteries Li-ion rechargeable, no memory effect, during changing of batteries.
 - ii. Capacity ≥ 4 hours of continuous measuring
 - iii. Battery charger, adaptor and cables
 - iv. Recharge time ≤ 2 hours
 - v. Power supply 220 VAC $\pm 25\%$; 47 to 53Hz
 - vi. Operating temperature 0 to 55° C
 - vii. Humidity 0 to $\geq 90\%$ RH
12. **Other features**
 - i. Tri axis Compensator (in addition to dual axis correction in the (X) and (Y) direction, mechanical error in the instrument is corrected).
 - ii. Range under Normal Conditions:-
 - Single Prism: 5000 to 7000m or more
 - Distance Accuracy in Prism Mode:
 - a) Up to 10 meters: $+(3\text{mm}+2\text{ppmxD})\text{mm}$
 - b) From 10 meters: $+(2\text{mm}+2\text{ppmxD})\text{mm}$
 - Distance Accuracy in Reflectorless Mode:
 - c) Up to 300 meters: $+(5\text{mm}+2\text{ppmxD})\text{mm}$
13. **Probable Quantity:** - **1 no.**

Conditions and requirements

- The total station shall be of such a design that it functions reliably and accurately under the prevailing environmental and operational conditions.
- The total station should be able to work efficiently within the temperature range 0° C to + 55° C
- Can measure Distance without Reflector 300 to 500 meter to a 90% reflective object (in good condition).
- The total station shall be easy to operate and maintain.
- The total station shall have all the latest technology of Absolute Encoders.
- The total station shall be supplied with the accessories as needed for effective deployment.
- All materials of the total station exterior shall be non-corrosive.
- All enclosures, cables and connectors shall be sturdy and water resistant.
- The total station shall be a rugged design that can cope with the prevailing shock and vibration as experienced in surveying operations and transport by jeep in rough terrain.
- The total station shall have an expected technical lifetime of not less than 10 years.
- Operator's and technical manuals, related to the type and model of the total station and the accessories shall be part of the delivery.
- Power consumption shall be small, to be derived from batteries integrated and/or External batteries.
- The batteries shall be rechargeable and assembled in packages
- The connectors and electrical cables associated with the total station shall be reliable and sturdy.
- The total station shall have Visible Laser Pointer.
- Date & Time is recorded while modifying or creating a file.
- On Board pre-loaded graphical software Power Topo Lite or equivalent including Area Perimeter, Volume (Cut/fill) and Licensed copy of Auto Plotter Civil Software should invariably be part of the supply. In built road design function.
- The total station shall comprise.
 - a. Theodolite with integrated laser distance meter, tilt compensation, digital controller with keypad and display, supporting data storage.
 - b. Data retrieval and communication unit .
 - c. Tripod for the total station.
 - d. Prism poles with associated tripods for prism assemblies.
- The laser output power shall be eye safe.
- Operational training shall be part of the delivery.

Prequalification requirements:-

1. The quotationer must be a registered firm having adequate experience in the item. Copy of the valid registration certificate with State/Central Govt. registration authority should be furnished alongwith the quotation.
2. Copy of sale tax, income tax certificate and supporting document of past supplies of Total Station to reputed organizations should be furnished.

3. An Earnest Money Deposit (EMD) of Rs.12,000.00 (Rupees Twelve Thousand) only in the form of Demand Draft/ Treasury Challan in favour of Executive Engineer, M.B. Division, CWC, Guwahati shall be accompanied with the quotation. The quotation without EMD shall be declared as Non-Responsive and shall not be considered.

TERMS & CONDITIONS

1. The material shall be as per the technical specifications & requirements given above.
2. The Total Station must be guaranteed on site against any manufacturing defects for a period of minimum one year from the date of successful testing.
3. Quotationers should supply drawings of Total Station and literature alongwith detailed specifications.
4. Spare parts required for Total Station alongwith rates and spare parts catalogue must be submitted with the quotation.
5. The Total Station may be inspected by the undersigned or authorized representative of this department before taking delivery.
6. Prices.
 - 6.1 Price must be in terms of Indian Rupees and should be quoted both in figures and words.
 - 6.2 The unit price should be for the same unit indicated in the N.I.Q.
 - 6.3 Price quoted should be invariably for delivery F.O.R. station of destination CWC, Guwahati, Assam and inclusive of charges such as packing, handling, freight, transit insurance, customs duty, octroi or any other taxes/charges wherever applicable.
 - 6.4 Discounts, if any, should be indicated in the quotation.
 - 6.5 Offers may be submitted on firm price basis.
 - 6.6 Rates should be valid for at least six months from the date of opening of quotation.
 - 6.7 The Income tax @ 2% as per codal provisions shall be deducted at source from the bill.
7. The payment will be made in Indian currency by A/c payee SBI Cheque/DD to the designated authority only after the material is received in full and in good conditions at the MBD, CWC, Guwahati. Exchange towards issuing of DD, if any, would be deducted from the payment.
8. Standard accessories like tool kit etc. should be supplied with the Total Station free of cost.
9. The quantity may vary without prior notice and without assigning reasons.
10. The firm shall impart familiarization training to the staff of department free of cost.
11. Facilities for after sale service and document showing the dealership from the manufacturer should be furnished.
12. Quotationer shall be responsible untill the entire stores contracted for arrive in good condition at destination.
13. The consignee will as soon as possible, but not later than 15 days of the date of arrival of stores at destination notify the bidder of any loss or damage to the stores that may have occurred during transit.

14. Any corrections cuttings in the quotation document shall be initialed by the bidder.
15. Material must be supplied within 20 (twenty) days of issue of supply order from this office.
16. The undersigned reserves the right to reject any or all the quotations or to alter/includes any conditions without assigning any reason.

-Sd-

(SAMAY SINGH)
EXECUTIVE ENGINEER
Tele Fax No. 0361- 2674267

Copy to:-

- 1) The Superintending Engineer, H.O. Circle, CWC, Guwahati for information.
- 2) The Director, SM Directorate, Sewa Bhawan, R.K.Puram, CWC, New Delhi with a request to upload at CWC website www.cwc.nic.in for wider publicity. A softcopy is e-mailed to smdte@nic.in for necessary action please.
- 3) The A.A.O., Accounts Branch, MBD, CWC, Guwahati.
- 4) Notice Board, MBD, CWC, Guwahati.
- 5) As per the list enclosed.