



## **TENDER DOCUMENT**

TENDER FOR THE PURCHASE OF

**Image Assisted Robotic Total Station**

UNDER

TWO BID SYSTEM

NO. 911-17/CVL-20032/Deptt/PS

## **CHECK LIST**

### **DULY FILLED CHECK LIST TO BE ATTACHED WITH THE TECHNICAL BID**

| <b>Sl. No.</b> | <b>Particulars</b>  | <b>Check Mark</b> |
|----------------|---|-------------------|
| 1              | Whether EMD / Tender Fees attached?   | Yes/ No           |
| 2              | Whether technical specifications of the quoted equipment attached?  | Yes/ No           |
| 3              | Whether catalog of the equipment attached?  | Yes/ No           |
| 4              | In case of authorized agent/distributor whether certificate/ authorization letter for the same issued by the manufacturer attached? | Yes/ No           |
| 5              | Whether tender document along with all Annexures (B to G) duly signed & stamped by the authorized signatory attached?               | Yes/ No           |
| 6              | Whether affidavit duly attested by the Oath Commissioner/Executive Magistrate regarding non-black listing of supplier attached?     | Yes/ No           |
| 7              | Whether list of Institutes/Organizations where the quoted model of equipment supplied by the tenderer in India is attached?         | Yes/ No           |
| 8              | Whether split rates of each sub units are quoted?   | Yes/ No           |
| 9              | In case of foreign suppliers quoting directly, whether, the name of Indian agent mentioned?   | Yes/ No           |
| 10             | Whether compliance sheet duly filled in, signed & stamped attached?   | Yes/ No           |
| 11             | Whether warranty certificate duly filled in, signed & stamped attached?   | Yes/ No           |
| 12             | Whether AMC certificate duly filled in, signed & stamped attached?  | Yes/ No           |

**List of Annexures**

| <b>Annexure</b> | <b>Particulars in annexures</b>                     | <b>Page No.</b> |
|-----------------|---|-----------------|
| A               | Technical Specifications                            | 6 to 8          |
| B               | Format for Technical Compliance Sheet               | 9               |
| C               | Format for Manufacturer's Authorization Certificate | 10              |
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| G               | Format for Warranty Certificate                     | 14              |
| H               | Format for AMC Certificate                          | 15              |



### **Notice Inviting Quotation**

IIT Ropar intends to purchase the following equipments. You are, therefore, requested to send your sealed offer in Two Bid System as per the instructions given below:

| Sl. No. | Description   | Quantity |
|---------|---|----------|
| 1       | <b>Image Assisted Robotic Total Station</b><br>(Detailed specifications of above items as per Annexure-A) | 1        |

#### **1. Schedule of EMD :**

|   |  |                                   |
|---|--|-----------------------------------|
| 1 | <b>Last Date and Time of receipt of tender :</b> | <b>02.11.2017 up to 03:00 PM.</b> |
| 2 | <b>Opening of Technical Bids on :</b>            | <b>02.11.2017 at 03:30 PM.</b>    |
| 3 | <b>Tender Fee</b>                                | <b>₹500.00</b>                    |
| 4 | <b>Earnest Money Deposit (EMD)</b>               | <b>₹86,000.00</b>                 |

#### **2. Tender Fees and EMD:**

Tender Fees & EMD to be submitted in shape of DD/BG/TDR favouring 'The Registrar, IIT Ropar' payable at Ropar alongwith the Technical Bid. Offers without EMD shall not be considered.

#### **3. Two Bid System :**

- (a) Technical bid consisting of all technical details alongwith commercial terms and conditions and EMD; and  
(b) Financial bid indicating item-wise price for the items mentioned in the technical bid.

Technical bid and financial bid should be sealed in separate covers duly superscribed and both these sealed covers are to be put in a bigger cover which should also be sealed and duly superscribed as "Technical Bid for the supply of "Image Assisted Robotic Total Station" and "Financial Bid for the supply of "Image Assisted Robotic Total Station" Due on < Last date and time >. Technical bids shall be opened at the first instance and evaluated by technical committee. At the second stage financial bids of the only technically qualified bidders shall be opened for financial evaluation and ranking before awarding the contract. Mixing price bid with technical bid will disqualify your bid for further evaluation.

#### **4. Submission of tender:**

Offers addressed to the 'Registrar, IIT Ropar' and valid for 90 days should reach the office of 'The Registrar, IIT Ropar, Room No. 104' on or before the last date and time. Tenders received late shall not be considered.

#### **5. Bidding:**

- a). Either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can bid.  
b). If an agent submits bid on behalf of a Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.

All offers other than those from the Principal/OEM should be supported by an authority letter from the manufacturer authorizing the supplier to tender on their behalf. In case of manufacturer a certificate or a copy thereof to the effect that the bidder is a manufacturer of the equipment must be accompanied with the technical bid prepared as per 'Annexure – B'.

#### **6. Opening of Bids:**

Technical bids will be opened as per the above schedule in the presence of bidders or their authorized representatives whosoever may wish to attend. In case the due date of receipt/opening of the quotation/s (technical/price) is declared a holiday in the Institute, then, the due date of receipt/opening of the quotations shall be the next working day at the same time.

#### **7. Price Bid:**

Price bid should be prepared as per 'Annexure – E'.

#### **8. Rates Comparison:**

Bidders are requested to send their rates on FOR, IIT Ropar basis in case of indigenous items and on FOB/FCA basis in case of imported items with separately mentioning CIF/CIP charges. Rates comparison will be made on Net Price (Including Freight/ Insurance/Installation/Taxes/Duties etc.) if offers are received both for indigenous and import items. If offers are received only for import items then comparison will be made on FOB/FCA basis. Rates of available foreign currency will be taken from RBI website as on the opening of the technical bids for the purpose of conversion in Indian rupees.

#### **9. Spares:**

The spare parts/wear & tear consumables, if any, required for trouble free operation of equipment to be quoted separately giving the full nomenclature, rate, quantity and shelf life of each item.

#### **10. Indigenous items:**

The items which can/are to be provided indigenously may be listed separately.

#### **11. Parts of Equipments:**

Where the equipment is composed of several subunits/components, the rate should be quoted for each subunit/component. The Institute reserves the right to increase or decrease the number of subunits/components and number of equipment according to its requirements. The rates in ambiguous terms will render the quotation liable to rejection. The words "Not quoting" should be clearly written against any item of equipment for which the tenderer is not quoting.

#### **12. Payment Terms:**

Payment will be made to the supplier through following modes.

**a). Indigenous goods:**

NEFT/Cheque/Demand Draft : 90% payment will be made within 30 days from the date of receipt of material at IIT Ropar and balance 10% after successful installation of the equipment and on the submission of performance bank guarantee valid for warranty period + 3 months .

**b). Imported goods:**

Letter of credit/Telegraphic Transfer/Sight Draft – 90% payment will be made through LC/TT/SD and balance 10% after successful installation of the equipment and submission of performance bank guarantee for 10% of order value, either by the principal company or by their Indian agent valid for warranty period + 3 months.

Bank charges occurred outside India will be borne by the beneficiary.

**13. Acceptance of Terms & Conditions:**

Bidders must confirm the acceptance of all the terms and conditions of this NIQ. Any non-acceptance or deviations from the terms and conditions must be clearly mentioned. However, tenderers must note carefully that any conditional offer or any deviation from the terms and conditions of this NIQ may render the quotation liable for rejection.

**14. Service Manual/Circuit Diagram**

It is specifically required that the bidders will supply all the operating & service manuals and circuit diagrams alongwith the equipment.

**15. Power Supply:**

The equipment should be quoted only for 220 volts and 50Hz electricity supply. The extra requirement of line voltage, current rating etc. and the optimum climate and environment required for the equipment must be stated precisely. Voltage stabilizers/ isolation transformers/CVT/UPS etc., as may be required shall be listed separately. The full technical specifications and literature in respect of the voltage stabilizer etc., must be furnished.

**16. Guarantee/Warranty and AMC:**

Duly signed and stamped certificate of at least 1 year comprehensive onsite warranty as per Annexure-G should be attached with the technical bid. Successful firm will be required to agree for payment of penalty for exceeding permissible downtime during Guarantee / Warranty period. Annual Maintenance Contract charges for 2 years after the expiry of warranty period should be quoted as per Annexure-H. The AMC shall include Spares/Consumables, periodic visits and emergency visits. The rates of AMC will be taken into consideration while making rates comparison.

**17. Country of origin:**

Country of origin of the quoted item should be mentioned in the offer in case of imported item.

**18. Customs Duty or Excise Duty:**

IIT Ropar is exempted from the payment of Customs Duty/Excise Duty. CDEC/EDEC with DSIR certificate will be provided along with the order (If applicable).

**19. Service Facility:**

Bidder should mention about the service set up in India and how capable they are to provide after sales services.

**20. Training:**

If required, should be included in your offer without any extra cost.

**21. Banker's details:**

Name and address of the banker of your company should be mentioned.

**22. Reference of supply:**

Name and contact details of the premier educational Institutes where the quoted equipment has been installed in India should be attached as per Annexure-F during the last 5 years. Copies of at least two purchase orders may be attached(If possible). IIT Ropar reserves the right to inspect the equipment for its actual performance in any of the listed Institute. The list of installations with contact details for the last 5 years must be provided.

**23. Liquidated Damages:**

In case the firm fails to execute the supply as per the purchase order in whole or in part as per the terms and conditions of PO, IIT Ropar can impose the penalty @1% per week of the undelivered stores, subject to a maximum of 10%. It will also be open to the institute to procure the required item(s) from any other source at the risk and expense of the firm.

**24. Relocation:**

The supplier has to stand guaranteed for the relocation of supplied equipment once the permanent campus of IIT Ropar gets ready for operation. Transportation of the equipment will be provided by the Institute.

Note: The Director, IIT Ropar reserves the right to accept/reject any or all tenders without assigning any reasons thereof and also to reject the material if the same is not found conforming to the specifications, with further right to affect risk and cost of the purchases.

**Registrar**

### IMAGE ASSISTED SCANNING TOTAL STATION

An image assisted robotic total station is required for the purpose of collection 3D positional acquisitions. Image assisted total stations are the new generation of total station which are also robotic in most of the cases. These are now extensively used in all kind of surveying. It is to be noted that the required instrument is also intended to capture dense point cloud, hence the instruments should be able to capture point cloud with high speed.

| Name of Item                               | Specification   |
|--|---|
| <b>TS Mode</b>                             |   |
| Angle Measurement                          | Angle Accuracy: 1" or better  |
| <b>Distance Measurement</b>                |   |
| Range with Prism                           | At least 5000m or more  |
| Non-Prism/Reflector less                   | Upto 700m or better   |
| Autolock and robotic Range                 | At least 700 m or better, 360° Prism: 300m or better  |
| Shortest search distance                   | 1m or less  |
| <b>Accuracy</b>                            |   |
| Prism mode                                 | 1mm + 2 ppm or better   |
| Non-Prism                                  | 2mm + 2 ppm or better   |
| Measurement Time on Prism                  | 2 s or less   |
| Measurement Time Non-Prism                 | 2 s or less   |
| <b>Scanning Mode</b>                       |   |
| Range                                      | 1m - 500m or more.  |
| Speed                                      | Full Dome (360° x 300°) Scanning @ 50 m distance with a spacing of 50 mm in less than 30 minutes.   |
| Accuracy                                   | 3D position accuracy @ 100 m should be 3 mm or better<br>Angular accuracy 5" or better  |
| <b>Camera</b>                              |   |
| Sensor                                     | 5 Megapixel or higher   |
| Frame Rate                                 | At least 10 frames per second   |
| Centreing/plummet                          | Laser or camera plummet   |
| Power Management                           | Exchangeable Lithium ion battery, Operation time 2 - 3 hrs/battery.Should support 2 or more batteries at a time.  |
| <b>Controller/device On-Board Software</b> |   |
|  | Following features are desired in the onboard software<br>Electronic Level displayed on controller display,<br>Atmospheric Corrections, Feature codes, COGO functionalities, Area & Volume computation & 3D Views, Area Sub division, stake out, Site Calibration, Active Background Maps, Link Files.Should support direct DXF/shp output on-board. Graphical Display of surveyed points Lines & Areas with Codes & Symbols and should support various coordinate systems. |
| <b>Robotic Communication:</b>              | Radio or WiFi   |
| <b>Weight</b>                              | Weight Total-station including Battery: up to 10.0 kg (Max)   |
| <b>Environmental Specification</b>         |   |
| <b>Working Temp. Range:</b>                | -20° to + 50° C   |

|                                  |   |
|----------------------------------|---|
| Humidity                         | 100%, non-condensing  |
| Data downloading                 | Instrument should have facility to connect USB drive (pen drive)/CF Card  |
| Controller/rugged tablet         |   |
| Operating System                 | Microsoft Windows 7 Professional including: Internet Explorer, Camera software with geo-tagging   |
| Operating Temperature            | -30 °C to 60 °C (-22 °F to 144 °F)  |
| Storage                          | -40 °C to 70 °C (-40 °F to 158 °F)  |
| Dust Protection                  | IP6x or better  |
| Processor                        | 1.6 GHz, Intel dual-core processor or better  |
| Memory                           | 4 GB DDR3 RAM or better   |
| Storage                          | 128 GB SSD or better  |
| Display                          |   |
|                                  | 7 in, 1024 x 600 hybrid reflective and transmissive with Sunlight-readable Gorilla Glass display and Capacitive multi-touch interface   |
| Battery                          |   |
|                                  | Smart batteries with LED power indicators.  |
|                                  | Standard: Two 7.5 V, 3000 mAh, 22 Wh  |
|                                  | Extended: Two 7.5 V, 6000 mAh, 45 Wh  |
|                                  | I/O: 3.5 mm audio jack, USB Host (2), HDMI, docking station I/O plate,  |
|                                  | DC input power  |
| Wireless                         |   |
|                                  | Bluetooth 4.0, Wi-Fi b/g/n, capable of GSM 3G cellular data or better   |
| Camera/GPS/Compass/Accelerometer | 5-megapixel camera with LED flash, photo and video recording capable or better.<br>In built GPS Receiver: 2-4 m accuracy with WAAS/SBAS correction or better.<br>Integrated Electronic Compass. |
| Schedule of Supply               | 1 Robotic TS with following accessories   |
|                                  | Rechargeable Batteries (03 nos.) with Dual Charger (1 nos.)   |
|                                  | Heavy Duty Wooden Telescopic Tripod – 2 nos.  |
|                                  | One 360 Degree prism & one normal Prism each with Holder  |
|                                  | Telescopic Range pole with Bipod  |
|                                  | Robotic Accessory kit complete - 1 nos  |
|                                  | Instrument Tribach, Detachable tribach for traversing application – 1 each  |
|                                  | Controller – 1 nos.   |

**Prerequisites for the vendor to qualify:** Vendor should have supplied the required/other related survey instruments to at least three CFTIs (Centrally Funded Technical Institute) or Centrally Funded Research Labs.





**FORMAT FOR MANUFACTURER'S AUTHORISATION CERTIFICATE**

To,  
**The Registrar**  
**Indian Institute of Technology Ropar**  
**Nangal Road, Rupnagar-140001**

**Sub. : Tender for “ \_\_\_\_\_ ”.**

Dear Sir,

We, \_\_\_\_\_, who are established and reputed manufacturers of \_\_\_\_\_, having factory/office at \_\_\_\_\_, hereby authorize M/s \_\_\_\_\_ [name & address of agents/distributors] to bid, negotiate and conclude the order with you for the above goods manufactured by us.

We shall remain responsible for the tender/Agreement negotiated by M/s \_\_\_\_\_, jointly and severally. No company or firm or individual other than M/s \_\_\_\_\_ are authorized to bid, negotiate and conclude the order in regard to this business against this specific tender as for all business in the entire territory of India.

An agency commission of \_\_\_\_% included in the FOB price is payable to M/s \_\_\_\_\_. We hereby extend our full guarantee and warranty as per the terms and conditions of tender for the goods offered for supply against this invitation for bid by the above supplier.

1. \_\_\_\_\_

2. \_\_\_\_\_

\*specify in detail manufacturer's responsibilities+the services to be rendered by M/s \_\_\_\_\_ are as under:

i) \_\_\_\_\_

ii) \_\_\_\_\_

[Specify the services to be rendered by the agent/distributor] In case duties of the agent/distributor are changed or agent/ distributor is changed it shall be obligatory on us to automatically transfer all the duties and obligations to the new Indian Agent failing which we will ipso-facto become liable for all acts of commission or omission on the part of new Indian Agent/ distributor.

Yours faithfully,

[Name & Signature]

For and on behalf of M/s. \_\_\_\_\_ [Name of manufacturer]

Note: This letter of authorization should be on the letterhead of the manufacturing concern and should be signed by a person competent and having the power of attorney to bind the manufacturer.

**FORMAT FOR NON BLACKLISTING OF SUPPLIER**

I/ We \_\_\_\_\_Manufacturer/partner/Authorized Distributor/Agent (strike out which is not applicable) of (Supplier) \_\_\_\_\_ do hereby declare and solemnly affirm that the individual/firm/company is not black-listed by the Union/State Government/Autonomous body.

Deponent  
Address \_\_\_\_\_

I/ We hereby solemnly declare and affirm that the above declaration is true and correct to the best of my knowledge and belief. No part of it is false and nothing has been concealed.

Deponent  
Dated: \_\_\_\_\_

(Note: To be furnished on non-judicial stamp paper duly attested by the Oath Commissioner.)

**FORMAT FOR THE SUBMISSION OF RATES – PRICE BID**

(To be submitted on the letterhead of the company/firm)

Name of the Equipment \_\_\_\_\_

Name of the Manufacturer \_\_\_\_\_

Make of the Equipment \_\_\_\_\_

Model Number \_\_\_\_\_

County of Origin \_\_\_\_\_

| Sl. No. | Particulars   | Rate/Unit |
|---------|---|-----------|
| 1       | Cost of the equipment with 1 year warranty (FOB value including Indian Agency Commission)   |           |
| 2       | Air freight, Insurance charges etc. (In case of import item)  |           |
| 3       | Total CIF value up to New Delhi Airport (In case of import item)/<br>Total FOR IIT Ropar value (In case of indigenous item)                               |           |
| 4       | AMC charges for 1st year after expiry of warranty   |           |
| 5       | AMC charges for 2nd year after expiry of warranty   |           |
| 6       | Percentage of Indian Agency Commission (IAC) payable to the Indian Agent, if any (In case of import item).  |           |
| 7       | FOR charges in Rupees including clearance, loading & unloading, transportation and insurance from New Delhi Airport to IIT Ropar (In case of import item) |           |
| 8       | Packing dimension of the equipment  |           |
| 9       | Gross weight of the equipment after packing   |           |

This is certified that the rates quoted above are not more than the rates charged from any other Institute/ Department/Organization.

**Note:**

**1. Taxes and other levies, if any are to be clearly specified in the bid.**



**CERTIFICATE OF WARRANTY**

i). I/We certify that the warranty shall be for a period of 1 year comprehensive onsite warranty starting from the date of satisfactory installation, commissioning and handing over of the equipment and of the works conducted therewith covered under the supply order in working order. During the warranty period, I/we shall provide free “after sale service” and the replacement of any part(s) of the equipment or rectification of defects of work of the equipment will be free of cost. The replacement of the parts shall be arranged by us, at our own cost and responsibility. We undertake that the above warranty shall begin only from the date of satisfactory and faultless functioning of the equipment for 60 days at IIT Ropar premises. The benefit of change in dates of the warranty period shall be in the interest of the use/your organization.

ii). During the warranty period, we shall provide at least 3 preventive maintenance visits.

iii). Uptime Guarantee: During the warranty period, we will be responsible to maintain the equipment in good working conditions for a period 328 days (i.e. 90% uptime) in a block of 365 days.

a). All complaints will be attended by us within 2 weeks of receipt of the complaint in our office.

b). In case there is delay of more than 2 weeks in attending to a complaint from our side then you can count the number of days in excess of the permissible response time in the downtime. The above said response time of 2 weeks for attending to a complaint by us will not be counted in the downtime.

c). Penalty: We shall pay a penalty equivalent to 0.1 % of the FOB value of the equipment for every week or part thereof delay in rectifying the defect.

Note: The right to accept the reason (s) for delay and consider reduction or waive off the penalty for the same shall be at the sole discretion of Director, IIT Ropar

iv). We certify that the equipment being/quoted is the latest model and that spares for the equipment will be available for a period of at least 10 years and we also guarantee that we will keep the organization informed of any update of the equipment over a period of 10 years.

v). We guarantee that in case we fail to carry out the maintenance within the stipulated period, IIT Ropar reserves the right to get the maintenance work carried out at our risk, cost and responsibility after informing us. All the expenses including excess payment for repairs/maintenance shall be adjusted against the Performance Bank Guarantee. In case the expenses exceed the amount of Performance Bank Guarantee, the same shall be recoverable from us with/without interest in accordance with the circumstances.

vi). We shall try to repair the equipment at IIT Ropar premises itself. However, the equipment will be taken to our site on our own expenses in case it is not possible to repair the same at IIT Ropar. We shall take the entire responsibility for the safe custody and transportation of the equipment taken out for repairs till the equipment is rehabilitated to the IIT Ropar after repair Any loss of equipment or its accessories under its charge on account of theft, fire or any other reasons shall be at our sole risk and responsibility which will be compensated to IIT Ropar for such losses at the FOB/CIF value for the damaged/lost equipment/part, including accessories.

vii). We undertake to perform calibration after every major repair/breakdown/taking the equipment for repair out of IIT Ropar premises.

viii). In case of extended warrantee, we undertake to carry out annual calibration of the equipment.

ix). We guarantee that we will supply spare parts if and when required on agreed basis for an agreed price. The agreed basis could be an agreed discount on the published catalogue price.

x). We guarantee to the effect that before going out of production of spare parts, we will give adequate advance notice to you so that you may undertake to procure the balance of the life time requirements of spare parts.

xi). We guarantee the entire unit against defects of manufacture, workmanship and poor quality of components.

**TERMS AND CONDITIONS OF THE SERVICE CONTRACT**

1. During the service contract period, the firm shall provide at least 3 preventive maintenance visits per year and attended to all emergent and break-down calls.
2. The service contract charges must be quoted separately for each year strictly as under and quoting of rates in ambiguous terms or in percentage terms etc. shall render the tender liable to rejection :
3. Rate for 1st year = \_\_\_\_\_ (Rupees in words).  
Rate for 2nd year = \_\_\_\_\_ (Rupees in words).
4. The service contract charges should be quoted only for services and travel cost etc. and should not include the cost of any replacement parts/components which shall be arranged by the IIT ROPAR at its own cost.
5. In each block of 365 days during the entire service contract period the firm will be responsible to maintain the equipment in good working condition for a period 328 days (i.e 90% uptime). The time taken by the IIT ROPAR in providing to the firm the spare parts shall not count towards the down time. All the complaints will be attended by the firm within 2 working days of the dispatch of the complaint to their office. In case there is delay of more than 2 working days in attending to a complaint then the number of days in excess of the permissible response time shall be counted in the downtime. In case total downtime exceeds the permissible downtime a fine equivalent to double the service contract charges shall be recovered from the firm on per day basis.
6. The right to accept the reason(s) for delay and consider reduction or waive off the penalty for the same shall be at the sole discretion of Registrar, IIT Ropar.
7. We undertake to carry out annual calibration of the equipment.
8. We undertake to perform calibration after every major repair/breakdown/taking the equipment for repair out of IIT Ropar premises.
9. The replaced parts shall remain the property of the IIT Ropar.
10. The firm shall try to repair the equipment at IIT Ropar itself. However, the equipment may be taken to their site, on their own expenses if in case it is not possible to repair the same at IIT Ropar. The firm shall take the entire responsibility for the safe custody and transportation of the equipment taken out for repairs till this is handed over the purchaser after repair. Any loss of equipment or its accessories on account of theft, fire or any such reasons shall be the sole risk and responsibility of the firm who will compensate the IIT Ropar for such losses at FOB value of the damaged/lost equipment/part including accessories.
11. During the service contract period the parts/components that may be needing replacement shall made available by the IIT Ropar at their own expenses and all import formalities, payment of customs duty etc., shall be complied with/borne by the IIT Ropar.
- 12. All service contract charges will be invoiced twice in each year. The payment of the invoice will be made afterwards.**
13. No price revisions will be accepted by the IIT Ropar during the entire tenure of the service contract agreement.