



KHULNA SHIPYARD LIMITED

BANGLADESH NAVY, KHULNA

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BABE (F) – 363/2022-2023/

05 July 2022

Dear Sir

INVITATION FOR QUOTATION OF GEODETIC TOTAL STATION.

1. Khulna Shipyard Limited will procure Geodetic Total Station **as per attached specification (04 Page)**, following terms & condition:
 - a) Please send your offer as a **local supply items**. Offer should include supply of materials at KSY site including custom duty, local vat & tax etc.
 - b) Payment: 100% payment will be made after receiving the material at KSY and satisfactory acceptance after deducting of VAT, TAX.
 - c) Items to be delivered within 180 days from the date of Purchase Order
2. Please send your offer within 21/07/2022 (1500 Hours) by e-mail or close envelop.
3. **1% (one)** Bid Bond/Earnest Money of the total quoted value must be submitted with the offer with 03 months validity. Bid Bond may be in form of Pay Order / Bank Guarantee (any schedule Bank of Bangladesh) in favour of Khulna Shipyard Limited, Khulna.
4. The successful tenderer will be required to furnish performance bond to the extent 5% of the total value either in the form of pay order / bank guarantee for the satisfactory execution of the order. The performance bond should be given by any Bangladesh Commercial Bank under their (Bank) full risk and liabilities. If the same is submitted by bank guarantee it must remain valid 06 (Six) months from the date of acceptance of materials. Performance bond must be furnished within 10 (Ten) day's from the date of letter of intent. It will be liable for forfeiture if the supplier fails to supply the goods within the specified time or commits any breach of contract.
5. Offer Validity: 120 Days from Tender Opening Date (as per clause no. 26).
6. **GUARANTEE FOR WARRANTY:** The Supplier shall furnish to buyer a Bank Guarantee for warranty (for the contracted item) after satisfactory acceptance of the items an amount equivalent to 05% of the contract price, which shall remain valid until expiry date of the warranty period (as per clause no. 24).

Yours sincerely

SK. SHAH MOSHIUR RAHMAN
Manager Commercial
For Managing Director

TENDER SPECIFICATION FOR GEODETIC TOTAL STATION

1. **Name of the Equipment.** Geodetic Total Station.
2. **Purpose.** A Geodetic Total Station is essential for measuring of slant distances, horizontal and vertical angle and elevations in topographic and geodetic works as well as tachometric survey. This is also used for 3D Coordinate measurement, Resection, Stake out, Topography observation, Offset measurement, Missing line measurement, Surface area calculation, Route surveying etc.
3. **Quantity.** One (01) complete set.
4. **Country of Origin.** Japan, Switzerland, EU, UK, USA, Canada (Name of country to be mentioned).
5. **Manufacturing Country.** Same as country of origin.
6. **Manufacturer.** To be mentioned (Name and Full Address to be mentioned).
7. **Year of Manufacture.** 2022 or later. The item should be brand new and of current production.
8. **Certificate/ Document of Authentication.** The local supplier must provide following original certificate(s)/ document(s) with the offer/ quotation of items as regard to the genuinity of source and item(s) in order to establish chain of links from the original source to supply items:
 - a. Catalogue: One set of technical catalogue in English for the authentication of the product
 - b. One certificate/ document by the manufacturer in favour of the supplier (in case of manufacturer as direct source).
 - c. Two certificates/ documents, one by the manufacturer to authorized agent and other by the authorized agent to supplier (in case of authorized agent as immediate source).
9. **Scope of Supply.** The scope of supply is to include the followings:
 - a. Main items (01 x Geodetic Total Station complete with all items necessary for immediate operation without the requirement of any other items such as attachments, accessories, consumables, etc) (as per paragraph 12-13).
 - b. Optional items, tools (As per paragraph 14-15).
 - c. Spare parts (As per paragraph 16).
 - d. Installation of Total station (As per paragraph 17).
 - e. Documents (User manual, Parts Identification List, Maintenance Manual, Spare Parts Catalogue etc; as applicable) and Certificates (As per paragraph 18 and 19).
 - e. Inspection, Test/Trial and acceptance services (As per paragraph 20).
 - f. Training (As per paragraph 21).
 - g. Warranty services, Guarantee and Guarantee for Warranty (As per paragraph 22-24).

10. **Standard.** The Total station is to be designed and constructed fulfilling the requirement of CE/ ASME/ DIN/ EN/ JIS/ ISO standards. The standards to which the quoted Total station complies with are to be specified.
11. **Operating Environment.** The environment under which the Total station will be operated and their performance will be measured is as under:

a. **Ambient Conditions.**

(1)	Air temperature	0°C ~ 50°C
(2)	Relative humidity	Up to 90% or above
(3)	Location	In-house & close to the sea shore/river bank.

12. **Technical Specifications.**

a. **General:**

1)	Brand	To be mentioned.
2)	Model	To be mentioned.
3)	Operating temperature	-20 to 60°C or better.
4)	Dust and water protection standard	IP66 or better.
5)	Guide light	Green LED (524nm) and Red LED (626nm), Operating range: 1.3 to 150m.
6)	Laser-pointer	Coaxial red laser using EDM beam
7)	Plummet	Optical & Laser (Option): Details To be mentioned.
8)	Levels	Graphic & Circular level (on tribrach): Details To be mentioned.

b. **Power supply:**

1)	Battery type	Li-ion rechargeable battery.
2)	Model	BDC70 or similar model (To be mentioned).
3)	Capacity	To be mentioned.
4)	Operating time	Minimum 28hours.

c. **Telescope:**

1)	Magnification	30x or better.
2)	Resolving power	Minimum 2.5".
3)	Field of view	Minimum 1°30' (26m/1000m).
4)	Minimum focus	1.3m
5)	Reticle illumination	Minimum 5 brightness levels.

d. **Angle measurement:**

1)	Minimum Display	0.5"/01"
2)	Accuracy	01"
3)	Dual-axis compensator	Working range: ± 06' or better.
4)	Collimation compensation	On/Off (selectable)

e. **Distance measurement:**

1)	Minimum Display	Fine: 0.0001m; Coarse: 0.001m; Tracking: 0.01m
2)	Laser output	Reflectorless mode: Class 3R. Prism/sheet mode: Class 1.
3)	Measuring range	Reflectorless: 0.3 to 800m. Under good conditions: 1,000m.

		Reflective sheet: (90 mm x 90 mm): 1.3 to 500m. (50 mm x 50 mm): 1.3 to 300m. (10 mmx 10 mm): 1.3 to 100m. Mini prisms: 1.3 to 500m. One prism: 1.3 to 5,000m Under good conditions : 6,000m
4)	Accuracy	In the condition of Reflectorless, Reflective sheet & Prism: Details To be mentioned.
5)	Measuring time	In the condition of Fine, Coarse & Tracking: Details To be mentioned.

f. Operating system, Interface and date management:

1)	Operating system	Linux.
2)	Interface	Serial RS-232C, USB2.0, Bluetooth Class 1.5.
3)	Bus cable length	Minimum 03 meter.
4)	Data storage	Internal memory: Minimum 50,000 points. Plug-in memory device: USB flash memory.

g. Weight: To be mentioned (Light weight will be preferable).

h. Dimensions: To be mentioned (compact and smaller size is preferable).

13. **Standard Accessories.** All necessary fittings and standard accessories which are required for immediate operation of Total Station, but not mentioned in this specification are to be provided with the set at the time of delivery. The list includes, but not limited to:
 - i) 1 x wooden/ aluminium tripod (standard size) for total station.
 - ii) 2 x wooden/ aluminium prism pole (standard size) for total station.
 - iii) 1 x single pole prism set (including Prism with soft carrying bag, prism holder
With target, 1.903m pole with circular level & carrying bag and mini tripod for
Clamping pole).
 - iv) Reflective sheets of standard sizes (90mm x 90mm, 50mm x 50mm, 10mm x 10mm)
for 01 year of use (Minimum 06 pcs).
 - v) USB drive (32GB) with data downloading software.
14. **Optional Items.** A list of Optional Items, which may be required for the Total station is to be provided indicating item wise price(price not included in the FOB).Technical details of these items should be given.
15. **Standard Tools.** A list of Standard Tools for maintenance and protection of the Total station is to be provided with the quotation (price included in the FOB).
16. **Spare Parts.** A list of OEM recommended Spare Parts required for the Total station for 05 (five) years operation and its accessories are to be provided with the quotation indicating item wise price (price not included in the FOB). Number of spare parts will be finalized during contract.
17. **Installation.** The supplier will unpack and make the Total station operational under the supervision of an OEM engineer at KSY premises.

18. **Documents.** Two (02) sets of following documents (in English language) are to be supplied with the Total station:
- a. **Instruction Manual.** It should contain the following:
 1. Detailed particulars and specifications of the Total station and their components.
 2. Parts Identification List.
 3. Operation and safety instructions.
 4. Maintenance instructions including maintenance schedule for the Total station and its accessories.
 5. Instructions regarding periodical tests and trials.
 - b. Spare parts catalogue for the Total station and its components.
19. **Certificates.** The manufacturer must give following Certificates that all the components of the Total station and its control system are in standard condition Following certificates should be provided with the Total station as per CE/ ASME/ DIN/ EN/ JIS/ ISO standards:
- a. Standardization certificate of total station.
 - b. Calibration certificate.
 - c. Others as per standard practice and classification rules.
20. **Test, Trial, Commissioning and Acceptance.** Test and trial will be carried out by the supplier at KSY premises. All expenses will be borne by the supplier. After satisfactory test & trial, acceptance certificate will be signed jointly by the representative of supplier and the representative of buyer.
21. **Training.** After completion of satisfactory test and trial, the supplier's engineer will provide complete training on operation, maintenance etc. of the Total station to 03 (three) operators for a period of 03 (three) working days. All cost including boarding, lodging etc. for the supplier engineer is to be borne by the supplier.
22. **Warranty.**
- a. Warranty for trouble free operation will be provided by the principal/ manufacturer for all the supplied items for a period of at least 06 (Six) months from the date of acceptance by the buyer.
 - b. The warranty should cover all parts and labour (including service engineer's cost) prices during warranty period.
 - c. For warranty repair/ replacement, the supplier will collect the defective items from buyer's premises and re-supply the same to the collecting place after warranty repair/ replacement.
23. **Guarantee.** The manufacturer will guarantee to supply the spare parts for at least 05 (five) years at reasonable price. Yearly increase of price of spares should not be more than 05% of the price list for spares provided with the quotation.

24. **Guarantee for Warranty.** The supplier shall furnish to buyer a Bank Guarantee for warranty (for the contracted items) after satisfactory handing over of the Total station for an amount equivalent to 05% of the contract price, which shall remain valid until expiry date of the warranty period.
25. **Nameplate.** The Nameplate of Total Station with standard accessories is to be provided in English.
26. **Validity of Offer.** The offer will remain valid for ***120 Days*** from the date of opening of tender.
27. **Condition for Acceptance of Quotation.** Quotation has to have supporting documents (all required certificates as mentioned before, booklets, leaflet, catalogue, brochure etc) having detailed particulars of the Total station. If detailed information regarding specifications, maker's books and catalogue about the same model of the Total station quoted, spare parts accessories, scope of supply, etc are not provided; the quotation will not be accepted.
28. **Compliance Statement.** A compliance statement (in a tabular format) fulfilling all the requirement of the tender is to be submitted for evaluation of the quotations. Stating mere 'Yes' or 'No' will not suffice and detailed description/ information as required is to be given. An incomplete compliance statement may attribute to cancellation of the offer. If any clause of this specification does not commensurate with offered the Total station, the deviation has to be spelt out clearly.