



An ISO 9001
Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT / MATERIALS MANAGEMENT

| | |
|-------------------------------|---|
| ENQUIRY | Phone: +91 431 257 76 53 Fax : +91 431 252 00 31 Email : skaruna@bheltry.co.in Web : www.bhel.com |
| NOTICE INVITING TENDER | |

| TWO PART BID | Enquiry Number: | Enquiry Date: | Due date for submission of quotation: |
|-------------------------------------|-------------------|-------------------|---------------------------------------|
| Tender to be submitted in two Parts | 2621500013 | 29.07.2015 | 31.08.2015 |

You are requested to quote the Enquiry number date and due date in all your correspondence. This is only a request for quotation and not an order.

Please note that under any circumstances both delayed offer and late offers will not be considered. Hence vendors are requested to ensure that the offer is reaching physically our office before 14.00 hrs on the Date of tender opening.

| Item | Description | Quantity |
|------|---|---------------|
| 10 | Spirometer as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in) | 01 No. |

Important points to be taken care during submission of offer

1. The Checklist for Acceptance of Commercial Terms & Conditions to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
2. All updates, amendments, corrigenda, etc., (if any), for each tender will be posted only on the above websites from time to time, as and when required, until each tender is opened. There will be no publication of such updates, amendments, corrigenda, etc., through newspapers or any other media.

BHEL's General guidelines / instructions (refer MM/CE/GENL/001) including bank guarantee formats and list of consortium banks, commercial terms check-list can be downloaded from BHEL web site <http://www.bhel.com> or from the Government tender website <http://tenders.gov.in> (public sector units > Bharat Heavy Electricals Limited page) under above Enquiry reference

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|--|---|
| <p>Tenders should reach us before 14:00 hours on the due date. Tenders will be opened at 14:30 hours on the due date. Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present.</p> | <p>Yours faithfully, For BHARAT HEAVY ELECTRICALS LIMITED</p> <p><i>Saranya E</i> Sr. Engineer / MM / Capital Equipment</p> <p>C. SABANYA Senior Engineer MM / Capital Equipment Tiruchirappalli - 620 014.</p> |
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SPIROMETER

Section-I:

Qualifying Criteria

The vendor has to compulsorily meet the qualifying criteria indicated in section-I to get qualified. Otherwise technical offer will not be considered.

| SI. No | PARTICULARS | VENDORS RESPONSE |
|--------|--|------------------|
| 1.0 | Vendor must have supplied and commissioned at least three equipments of the quoted model in the last five Years (as on original date of tender opening). | |
| 2.0 | Vendor to provide full contact details of their customers to whom the quoted model has been supplied in the last five years. BHEL reserves the right to verify the performance of the equipment with the list of customers provided. | |

Section-II:

Vendors are requested to provide the following details/Confirmation

| SI No | PARTICULARS | VENDORS RESPONSE |
|-------|---|------------------|
| 3.0 | Vendor to provide contact details of the service centers from where service shall be provided to equipment in BHEL , Trichy. Service centers shall be preferably in Tamil Nadu. | |
| 4.0 | Vendor must ensure that qualified service engineers are available in their service centre to attend to the service request from BHEL at short notice. | |
| 5.0 | Vendor must ensure the availability of spares and consumables for the quoted model for 5 years from commissioning. | |

SPIROMETER

SPECIFICATIONS:

SPIROMETER

PC based spirometer to measure, display, print, store and recall slow and dynamic pulmonary function tests, with prediction.

| S.No | BHEL Requirements | | Vendor's Response |
|------|----------------------------|--|-------------------|
| | Operation | PC based Spirometer | |
| 1. | Type | Mounted on Table Stand / Trolley to present mouthpiece to patient at sitting mouth height | |
| 2. | Sensor | Pneumotachograph | |
| 3. | Flow range | ± 0.05 to ± 14.0 l/s | |
| 4. | Flow resolution | 0.01 l/s | |
| 5. | Resistance | <0.05 kPa/(l/s) at 10 l/s | |
| 6. | Volume detection | Digital flow integration | |
| 7. | Volume range | ± 0.01 to ± 10.0 l | |
| 8. | Volume resolution | 0.01 l | |
| 9. | Volume accuracy | $\pm 3\%$ or ± 0.05 l, whichever is greater | |
| 10. | Interface | USB / serial port | |
| 11. | Software | <p>Dedicated software for onscreen real-time graphics display, storage and output. To be installed at the time of commissioning, and supplied on media.</p> <p>Should implement - test operation, predicteds & trend display, data management, calibration, report generator, prediction editor, interpretation.</p> <p>Free software upgrade for compatibility with OS.</p> | |
| 12. | System requirements | Microsoft Windows based PC, PC to be supplied by BHEL | |

SPIROMETER

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|------------|--|---|--|
| 13. | Manual | (English) To be supplied | |
| 14. | Calibration | Physical, with 1 l or 2 l syringe (to be supplied) | |
| 15. | Prediction equations | User selectable various authors, including Indian | |
| 16. | Standard conformity | ATS | |
| 17. | Tests | Vital Capacity (VC), Forced Vital Capacity (FVC), Forced Expiratory Volume in 1.0 sec (FEV1), Forced Expiratory Ratio (FEV%), Peak Expiratory Flow Rate (PEFR), Mid-Expiratory Flow Rates (MEF75, MEF50,MEF25), Flow-Volume Curve, Broncho-dilator response. | |
| 18. | Spares | Pneumotachograph (20), Pneumotach holders (2), Connecting tubes – measurement / calibration (2 each) | |
| 19. | Accessories | Calibration syringe, nose clips (30), mouthpieces (25), dust cover | |
| 20. | Software updates | Software updates if any in the equipment should be taken care by the vendor at free of cost. | |
| 21. | Warranty | 2 years on all components | |
| 22. | Annual Maintenance Contract (AMC) | Vendor to confirm to provide AMC after the guarantee period is completed | |