

**Bharat Heavy Electricals Limited**

( A Government of India Undertaking)

Electronics Division

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**Tender document for the supply of VERTICAL CAROUSAL FOR ICT FIXTURE****R F Q Number : TRSM900004**

Tender Qty : Two Numbers

Tender Due Date and Time : 16.01.2008 13.00 Hrs

Tender Opening Date and Time : 16.01.2008 13.30 Hrs

Place of opening of Tender : SA – MM Conference hall

**Scope:**

Supply, Installation & Commissioning of the Automatic Vertical Storage and Retrieval system as per the following specifications

**1. Two part Bid** - Tender shall be submitted in two parts :

- a. Part I – Techno commercial bid without prices.
- b. Part II – Price bid

**2. Earnest Money Deposit** : EMD of Rs 50,000/- ( rupees twenty five thousand only) shall be submitted in the form of DD along with the bid. EMD in the form of DD / Pay order only is acceptable & any other form is not acceptable and the bid is liable for rejection. EMD amount doesn't carry any interest. The same will be converted as Security Deposit for the successful bidders and for unsuccessful bidders the same will be refunded after finalization of the order. For successful bidders EMD will be refunded after submission of PBG.

**3. Delivery Period**: Equipment shall be delivered, within 4 months from the date of placement of technically & commercially clear purchase order.

**4. Terms and conditions:**

1. All the Bidders shall meet the **pre-qualification criteria** and Comply with **Technical Specification** mentioned in this specific tender.
2. Indian Bidders are required to comply with the **general terms and conditions** as per SA – 01 ( Annexure –I)
3. Foreign Bidders are required to comply with the **general terms and conditions** as per SA – 02. ( Annexure –II)



**REF: 384/SKP/FR3/PQ01**  
**Pre Qualification Criteria**

01. The vendor shall be an Original Equipment Manufacturer (OEM). Only the OEM or their authorized dealers in India along with an authorization letter can submit offers. An authorized Representative/Dealer in India, cannot quote for the same equipment from more than one OEM.
02. The offer shall be only for Standard Catalog Items from the manufacturer and not custom-made one. All the specifications should be supported by Standard Catalogs and Data Sheets of the manufacturer.
03. Offer shall be for a new equipment and not for any refurbished / used equipment. All the parts used in the machine shall also be new and not used / refurbished ones. A declaration to the above effect to be furnished.
04. Foreign OEM shall have Authorized Indian dealer(s) / representative(s) for After-sales service and support. The authorization letter for the dealer/ representative shall be provided.
05. The vendor should have already supplied and installed 3 nos. of similar machines in India during the past 5 years and these must be operating satisfactorily for at least past one year. The details of the customers with contact details, machines installed, date of installations etc. to be provided.
06. The vendor or their authorized service representatives shall have trained engineers in India for commissioning & service for the offered equipment and shall be in a position to provide prompt after sales service and spares support for our installations.
07. The vendor shall be in a position to undertake AMC or provide service support for the equipment supplied, after the expiry of the warranty/ guarantee period either directly or through a service representative.
08. If required by BHEL, the vendor shall arrange for a demonstration of the machine or a similar system operating in India.
09. The vendor shall furnish a comprehensive warranty for at least 12 months from the date of commissioning.

**NOTE:**

1. Pre qualification will be carried out based on the details furnished by the vendor / feedback from their customers / inspection of the company / product if required by BHEL and at its sole discretion.
2. The Pre qualification criteria are mandatory requirements and the technical bids will be evaluated only when the Pre Qualification criteria are met.



**REF: SAT-SKP-VCICT-01**

**Specification for Vertical Carousel, for ICT Fixtures:**

**A.)Scope:** Supply, Installation & Commissioning of the Automatic Vertical Storage and Retrieval system as per the following specifications.

**B.)Technical Specifications:** The offer shall be corresponding to the parameters under the specifications below or better. Pointwise compliance to the following specification is required

**Description :**

Automated Vertical Modular Storage System having Static Trays with Mobile Extractor System. The system shall have series of trays vertically positioned at both Front & Rear columns. A retriever unit, controlled by an on board controller, moves up and down centrally. The retriever unit shall position the required tray at the access window for loading and unloading of components( ICT fixtures).

The system shall be suitable for storage of ICT fixtures, of average size:

600mmW x 500mmD x 260mmH, each weighing 25kgs to 40kgs.

The system shall be capable of storing up to 6 fixtures per tray.

**1.0 Trays**

Number of Trays	Eighteen(18). Facility to add additional trays in future.
Tray Spacing	Trays shall be locatable with spacing in steps of $\leq 75$ mm vertically. Facility to add additional trays in future with this spacing.
Tray Width	$\geq 3000$ mm
Tray Depth	610mm minimum. (To accommodate ICT fixture size of 600mm length)
Material	Tray Material should be rust-proof / ANTI-STATIC
Load capacity per tray	200Kgs. Each accommodate shall hold atleast six fixtures.

**2.0 The Unit**

Max Available Space for the Unit	3380mm(W) x 2320mm(D) x 4200mm(H)
Unit Width	Maximum within the limit of 3380mm
Unit Depth	Maximum within the limit of 2320mm
Unit Height	approx. 4000mm (max within 4200mm - ceiling height)
Exterior finish & Colour	Shall be Powder coated , Colour selectable at the time of ordering, available options to be specified.
<b>Average Access Time</b>	30 secs or less

**3.0 Access Window**

One window. At an elevated position 800mm (approx) above the ground level. Window height- approx. 750mm

Access Doors should be supplied with Lock & Key facility.



<b>4.0 Software, Control &amp; Interface:</b>	
For computer interface standard port should be provided along with the machine.	
Shall have the feature of access control through password.	
System language : English	
LCD Display For The Controller	
<b>4.1 Component Storage &amp; Retrieval</b>	
Shall be accessible by part number of minimum of 12 digits Alphanumeric	
Shall also be accessible by location number	
While loading and retrieving , only the desired tray shall move and be made accessible at the access window.	
<b>5.0 Safety:</b>	
Safety Alarms, Emergency Stop Buttons To Be Provided. The System Should Comply Defined Safety Standards. Safety Against Fracture Of Carrier Chains.	
The Unit shall be provided with necessary features, and the access window shall be duly enclosed with safety shutters to avoid accidents, injuries to operators.	
Protection against free fall of trays, in case of power failure, shall be provided.	
<b>6.0 Power Supply :</b>	415V AC +/- 10%, Three Phase, 50Hz.
Back-up power shall be provided for 15-20 minutes for the control system.	
<b>7.0 Operating Environment:</b>	0-45 deg C, RH upto 80%
<b>C. ) Details to be furnished along with the technical offer</b>	
1. System parameters with brief explanation of features.	
2. If more than one model is quoted, separate offer with complete technical details shall be submitted.	
3. Additional Accessories, which enhance system performance shall be quoted separately with price break up.	
4. Clause wise deviations, if any, should be brought out clearly. If there are no deviations, the vendor has to positively certify compliance to the specifications in toto.	
5. The complete technical information and catalogue shall be given.	
<b>D.) Documents to be submitted along with technical offer</b>	
1. The vendor should have supplied and commissioned a minimum of 3 such systems in India. Detailed reference list including installations in India with details of supply & commissioning dates, contact names for similar systems and user certificates shall be provided.	
2. Details of authorized service agents in India to be furnished	
3. Terms of annual maintenance after the agreed warranty / guarantee period shall be furnished	
4. List of recommended spares for maintenance purposes to be indicated.	
5. All commissioning / service requirements such as power, compressed air, water, lubricants, coolants, consumables, any civil requirements like special foundation arrangements etc. have to be listed.	

**E. ) Documents to be furnished alongwith Equipment**

1. Operation, Maintenance, Service & spare parts manual to be supplied **in triplicate** along with equipment.
2. Detailed Hydraulic, Pneumatic, Electrical and Electronic circuit diagram have to be provided in triplicate
3. The lubrication points are to be identified on the machine with respect to O & M manual. The schedules for lubrications are to be provided
4. Test certificate/Inspection Report shall be submitted prior to despatch along with the equipment serial number details.

**F. ) General Terms**

1. Mandatory spares for 2 years of 2 shift operations shall be covered separately in the offer with item wise price break-up.
2. Supplier shall guarantee for one year of trouble free performance of equipment from date of commissioning and shall carry out preventive maintenance periodically. The periodicity shall be spelt out.
3. The equipment and accessories shall carry on-site, comprehensive warranty of one year from the date of commissioning including spares and service.
4. Additional warranty for two, three and five years as a slab rate shall be quoted as an option separately with a validity period of one year.
5. Training shall be provided to minimum 3 BHEL personnel for operation & maintenance at no additional cost
6. The software upgrades during the warranty / guarantee period shall be provided free of cost.