Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)
Tiruchirappalli – 620014, TAMIL NADU, INDIA
CAPITAL EQUIPMENT / MATERIALS MANAGEMENT

An ISO 9001 Company

ENQUIRY NOTICE INVITING TENDER	Phone: +91 431 257 4237 Email : spsy@bheltry.co.in : vijayak@bheltry.co.in Website : www.bhel.com

TWO PART BID Tender to be submitted in two Parts	Enquiry Number: 2631700076	Enquiry Date: 02.11.2017	Due date for submission of quotation: 27.11.2017

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	**Heavy Duty Optimizer storage System (1 bay)** as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com and https://eprocure.gov.in	**1 No.**
20	**Heavy Duty Optimizer storage System (3 bay)** as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com and https://eprocure.gov.in	**1 No.**

Important points to be taken care during submission of offer

1. **Delivery terms shall be FOR BHEL Stores, Trichy .**
2. **Compliance Form No: TRY/IND/08 to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.**
3. **Delivery period required is 2 months from the date of Purchase Order.**
4. **Erection and commissioning shall be done at BHEL Trichy by the supplier.**
5. **Time period required for Erection and Commissioning shall be 2 weeks from the date of intimation by BHEL**
6. **EMD Not applicable.**
7. **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 compliance form and technical specification can be downloaded from BHEL web site http://www.bhel.com and https://eprocure.gov.in (public sector units > Bharat Heavy Electricals Limited page) under Enquiry reference "2631700076".

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

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED

S.PARTHASARATHY
MANAGER
CAPITAL EQUIPMENT / MM
BHEL, TRICHY-620014.

Manager / Capital Equipment / MM

Specification for Heavy duty Optimizer Storage System (Single Bay) Qty: 1 No.

1. **CONFIGURATION:** A **Heavy Duty storage system** for storing machine tool spares and consumables. The configuration and general arrangement of the storage system shall be similar to "Sample Sketch 1"

The configuration of one storage system shall have the following:

A - Single Face Fixed Unit **(SFFB/SFFU) - 1 No.**

B - Double Faced Movable Unit **(DFMB/DFMU) - 3 Nos.**

C - Single Face Movable Unit **(SFMB/SFMU) - 1 No.**

2. **ARRANGEMENT AND LOADING CAPACITY:**
   1. Each face of the storage system shall have 5 storage spaces/ shelves.
   2. The load bearing capacity of each shelf in the single and double faced units shall be min **150 Kg.**
   3. The design shall have a factor of safety of min 1.5 and capable of carrying the specified loads on each shelf for a longer period as the shelf will always be standing with full load.
   4. The storage system will be considered as commissioned only when the storage system is proved out for the maximum loads specified..
   5. The Vendor has to use thickness of sheets for side, back, top and Shelf bottoms as mentioned below. Vendor to confirm.

3. **RAW MATERIAL:** The Optimizer shall be manufactured by Bolted structure with sufficient thickness of CRCA Steel confirming to IS 513 / IS 10748 / IS 1079 grade for back, side and top sheets. The bottom sheet of shelves shall have a higher thickness more than the side and top sheets. Vendor shall use the following thickness of sheets.
   1. Thickness of the side sheets: 1.2 mm minimum
   2. Thickness of the back sheets: 1.2 mm minimum
   3. Thickness of the top sheets: 1.2 mm minimum
   4. Thickness of the partition sheets in DFMU: 1.2 mm minimum
   5. Thickness of the shelf bottom sheets: 1.5 mm minimum

4. **SINGLE FACE FIXED UNIT & SINGLE FACE MOVABLE UNIT :** Dimensions of single face fixed unit and single face movable unit are same and given below:
    1. Width : Around 900 mm
    2. Depth : Around 450 mm
    3. Height : Around 1950 mm (Excluding undercarriage and rails)
    4. No. of Loading Levels: 5 levels formed by 4 rack sheets as shelf bottom.

5. **DOUBLE FACE MOVABLE UNIT :** Dimensions of double face movable units (twin mobile with centre partition) are given below:
    1. Two units of SFMU shall be integrated back to back with one partition wall sheet in between.
    2. No. of Loading Levels: 5 level formed by 4 Nos. of adjustable shelves on each side.

The five units (SFFU-1 No., SFMU-1 No. and DFMU- 3 Nos.) are to be bolted to the undercarriage. The approximate height of undercarriage shall be 65mm (approx.) and height of rails shall be 35mm (approx.).

6. **PAINTING:** The storage system shall be treated for anti rust and cleaned properly before powder coating. The final finish shall be of epoxy polyester powder coating with a dry film thickness of minimum 40 microns.

Specification for Heavy duty Optimizer Storage System (3 Bay)

Qty: 1 No.

1. **CONFIGURATION:** A Heavy Duty storage system for storing machine tool spares and consumables. The configuration and general arrangement of the storage system shall be similar "Sample Sketch 2".

The configuration of one storage system shall have the following:

A - Single Face Fixed Unit **(SFFB/SFFU) - 1 No.**

B - Double Faced Movable Unit **(DFMB/DFMU) - 3 Nos.**

C - Single Face Movable Unit **(SFMB/SFMU) - 1 No.**

2. **ARRANGEMENT AND LOADING CAPACITY:**
   1. Each body block (SFFU/DFMU/SFMU) building consists of one main unit & then Add-on units to make three bay. Twin mobile blocks are to be placed in between single static and single last units. The number of twin mobile blocks required for BHEL = 3. Each bay of the storage system shall have 5 storage spaces/ shelves as shown in the sample sketch 2.
   2. The load bearing capacity of each shelf in the single and double faced units shall be min **150 Kg**.
   3. The design shall have a factor of safety of min 1.5 and capable of carrying the specified loads on each shelf for a longer period as the shelf will always be standing with full load.
   4. The storage system will be considered as commissioned only when the storage system is proved out for the maximum loads specified..
   5. The Vendor has to use thickness of sheets for side, back, top and Shelf bottoms as mentioned below. Vendor to confirm.

3. **RAW MATERIAL:** The Optimizer shall be manufactured by Bolted structure with sufficient thickness of CRCA Steel confirming to IS 513 / IS 10748 / IS 1079 grade for back, side and top sheets. The bottom sheet of shelves shall have a higher thickness more than the side and top sheets. Vendor shall use the following thickness of sheets.

1. Thickness of the side sheets: 1.2 mm minimum
2. Thickness of the back sheets: 1.2 mm minimum
3. Thickness of the top sheets: 1.2 mm minimum
4. Thickness of the partition sheets in DFMU: 1.2 mm minimum
5. Thickness of the shelf bottom sheets: 1.5 mm minimum

4. **SINGLE FACE FIXED UNIT & SINGLE FACE MOVABLE UNIT:** Dimensions of single face fixed unit and single face movable unit are same and given below:
   1. Width : Around 900 mm
   2. Depth : Around 450 mm
   3. Height : Around 1950 mm (Excluding undercarriage and rails)
   4. No. of Loading Levels: 5 levels formed by 4 rack sheets as shelf bottom.

5. **DOUBLE FACE MOVABLE UNIT:** Dimensions of double face movable units (twin mobile with centre partition) are given below:
   1. Two units of SFMU shall be integrated back to back with one partition wall sheet in between.
   2. No. of Loading Levels: 5 level formed by 4 Nos. of adjustable shelves on each side.

The five units (SFFU-1 No., SFMU-1 No. and DFMU- 3 Nos.) are to be bolted to the undercarriage. The approximate height of undercarriage shall be 65mm (approx.) and height of rails shall be 35mm (approx.).

6. **PAINTING:** The storage system shall be treated for anti rust and cleaned properly before powder coating. The final finish shall be of epoxy polyester powder coating with a dry film thickness of minimum 40 microns.

PARTITIONS / ACCESSORIES FOR OPTIMIZER:

1. Total height from ground level shall be approx. 100 mm more than the height of superstructure (1900 mm body + 65mm undercarriage + 35mm channel)

2. General arrangement as per enclosed sample sketch-1 and sketch-2.

3. Under carriage shall be of fabricated type using structural steel sections.

4. Bolted construction for superstructure with steel slotted / rolled / formed angles (as required), corner plates, electroplated / galvanized nuts & bolts are to be used.

5. All load-bearing shelves shall be of 1.5 mm (minimum) thickness CRCA steel sheet with allowable load carrying capacity of min 150 kg per shelve.

6. One number of acrylic or metallic card holder has to be provided in static and last drive block. In twin mobile, two numbers of acrylic or metallic card holders shall be provided.

7. Suitable Round / square steel bright bar / channels of suitable size are to be used for rails for smooth operation.

8. Drive Wheel : For the movement of units a drive wheel and sprocket-chain mechanism with provision for manual locking of individual units when in use has to be provided.

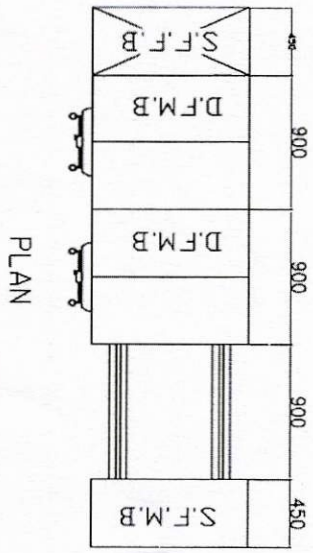
9. Centralised locking arrangement has to be provided through locking stiffener mounted on the rear side of single last unit so that it gets locked on channels when all the units are brought together for locking.

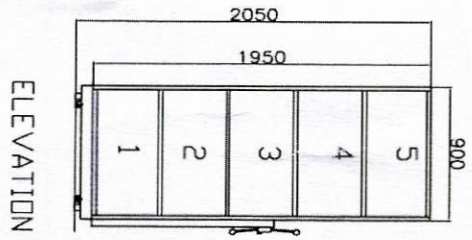
10. Each drive type unit has to be provided with locking knob near the Drive wheel for manual locking of individual units when persons are using the storage system.

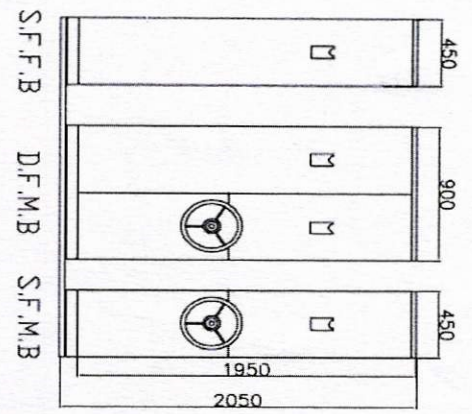
GENERAL:

1. The proposed system is Drive Type optimizer with drive wheels fitted. The system shall be such that the manual effort required for opening / closing of the rack is minimum.
2. Required length of rails / channels are to be provided for each system.
3. Suitable elegant wheels shall be provided on the mobile blocks for opening / closing.
4. The aisle width shall be sufficient enough for a person to enter inside and access either side of the storage racks.
5. The Equipment is to be guaranteed for its satisfactory performance for 12 months from the date of installation.
6. Offers received from Indian OEMs only will be considered by BHEL.
7. OEM should have their own press brake, powder coating plant with baking oven, powder coating applications, etc.
8. Offers received from other than OEMs without required facilities as mentioned in point No. 6 will not be considered by BHEL.

SAMPLE SKETCH-1

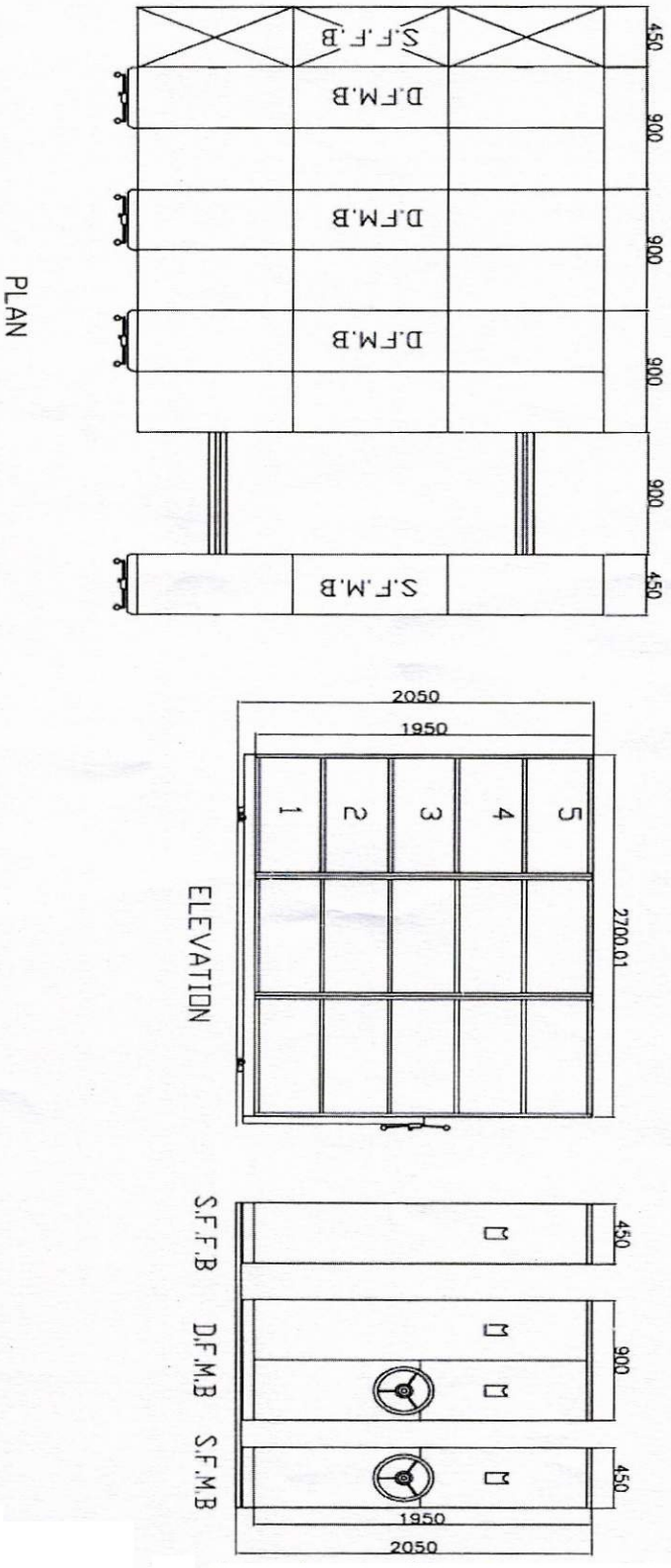






ONE SET

SAMPLE SKETCH-2



ONE SET