



# Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT/ MATERIALS MANAGEMENT

An ISO 9001  
Company

<b>ENQUIRY</b>	Phone: +91 431 257 7653 Fax : +91 431 252 0031 Email : <a href="mailto:skaruna@bheltry.co.in">skaruna@bheltry.co.in</a> Web : <a href="http://www.bhel.com">www.bhel.com</a>
<b>NOTICE INVITING TENDER</b>	

<b>TWO PART BID</b>	<b>Enquiry Number:</b>	<b>Enquiry Date:</b>	<b>Due date for submission of quotation:</b>
Tender to be submitted in two parts	<b>2631600011</b>	<b>07.07.2016</b>	<b>30.07.2016</b>

You are requested to quote the Enquiry number, date and due date in all your correspondences. 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	Delivery
10	Heavy Duty Drive Type Optimizer Storage System as per the technical specification, BHEL commercial terms & conditions applicable (to be downloaded from web site <a href="http://www.bhel.com">www.bhel.com</a> or <a href="http://tenders.gov.in">http://tenders.gov.in</a> )	2 Nos.	05.11.2016

### Important points to be taken care during submission of offer

1. Compliance Form to be duly filled and enclosed along with your 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 including bank guarantee formats and list of consortium banks, commercial compliance form 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 Enquiry reference "2631600011".

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

*K. Singh*  
**KUMAR GAUTAM SINGH**  
 Senior Engineer  
 MM / Capital Equipment  
 BHEL, TRICHY - 620 014.

## Specification for Heavy duty Optimizer Storage System (Single Bay) Qty: 2 Nos

### 1. CONFIGURATION:


A Heavy Duty storage system for storing Welding consumable packets, stellite powder cans, welding accessories and personal safety kits etc. The configuration and general arrangement of the storage system shall be similar to TYPE II of "Sketch 1"

The configuration of one storage system shall have the following:

- A - Single Face Fixed Unit (SFFU) – 1 No
- B - Double Faced Movable Unit (DFMU) – 3 Nos
- C - Single Face Movable Unit (SFMU) – 1 No

### 2. ARRANGEMENT AND LOADING CAPACITY:

1. All compartments of the storage system are not equal in size (height).
2. Each face of the storage system shall have 8 storage spaces separated by partition plates with bolted structure.
3. The storage system shall have one long vertical shelf "X" as marked in the Sketch 2 at the base level where packets of 1 metre long welding rods will be stored vertically. The size of this shelf shall be 450 x 450 x 1200 mm (width x depth x Height) approximately. The load bearing capacity of this shelf shall be min 200 Kg.
4. One such long vertical shelf "X" will be there in each SFFU and SFMU. Each DFMU shall also have such long vertical shelf (one on each side).
5. Beside the shelf "X" there shall be shelf "Y" (3 Nos) " as marked in the Sketch 2. The width shall be 450 mm and height shall be approximately 375 -385 mm.
6. The space remaining above these 4 shelves (1 long+3 small referred above), shall be divided in to 4 shelves "Z" as marked in the Sketch 2 (2 rows x two columns). The approximate height of these shelves shall be 300 mm.
7. The load bearing capacity of shelves other than "X" shall be min 150 Kg.
8. 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 though the materials will be withdrawn regularly for daily use the shelf will always be standing with full load.
9. The storage system will be considered as commissioned only when the storage system is proved out for the maximum loads specified..
10. The Vendor has to use thickness of sheets for side, back, top and Shelf bottoms as mentioned below. -- Vendor to confirm.

  
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**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 (A&C) :**

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 1900 mm (Excluding undercarriage and rails)
4. No. of Loading Levels : 5 levels formed by 4 rack sheets as shelf bottom.

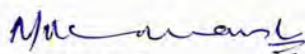
**5. DOUBLE FACE MOVABLE UNIT (B) :**

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 inbetween.
2. No. of Loading Levels : 5 levels on each Face of DFMU

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.

  
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**7. 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 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. 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.
6. Suitable Round / square steel bright bar / channels of suitable size are to be used for rails for smooth operation.
7. 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.
8. 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.
9. 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.

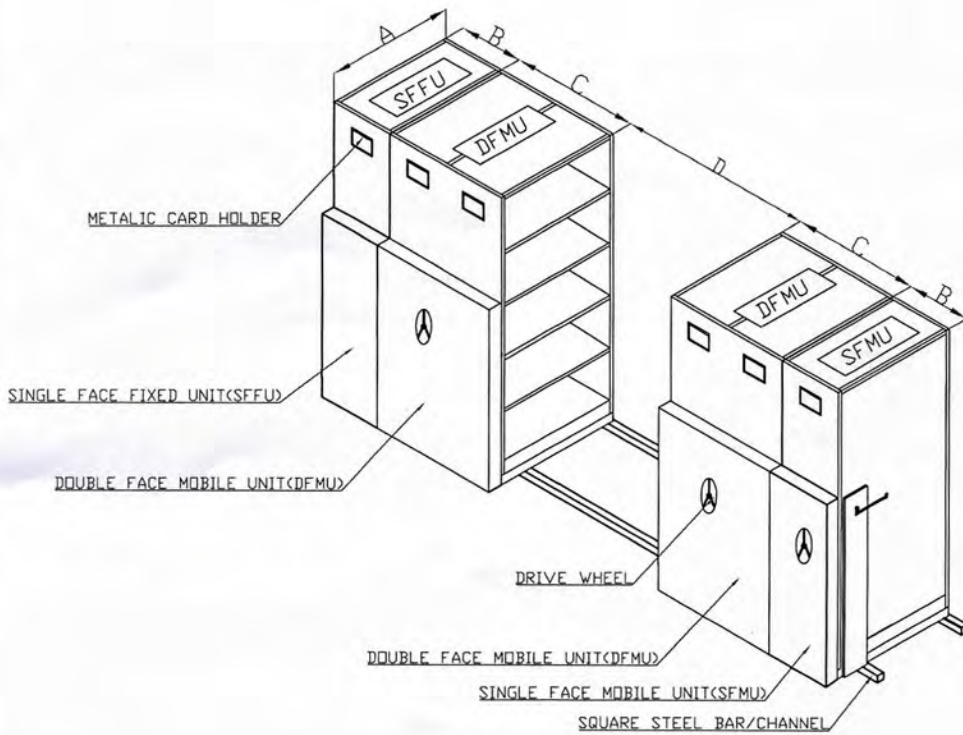
**8. GENERAL:**

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. The Equipment is to be guaranteed for its satisfactory performance for 12 months from the date of installation.
5. Offers received from Indian OEMs only will be considered by BHEL.
6. OEM should have their own press brake, powder coating plant with baking oven, powder coating applications, etc.
7. Offers received from other than OEMs without required facilities as mentioned in point No. 6 will not be considered by BHEL.

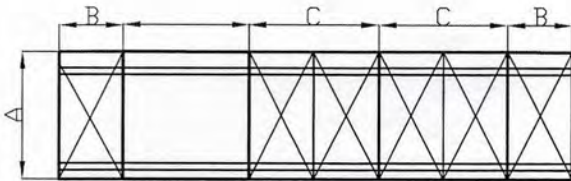
  
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# SKETCH 1- GENERAL ARRANGEMENT OF SINGLE BAY OPTIMIZER



DIMENSIONS IN MM (APPROX.)



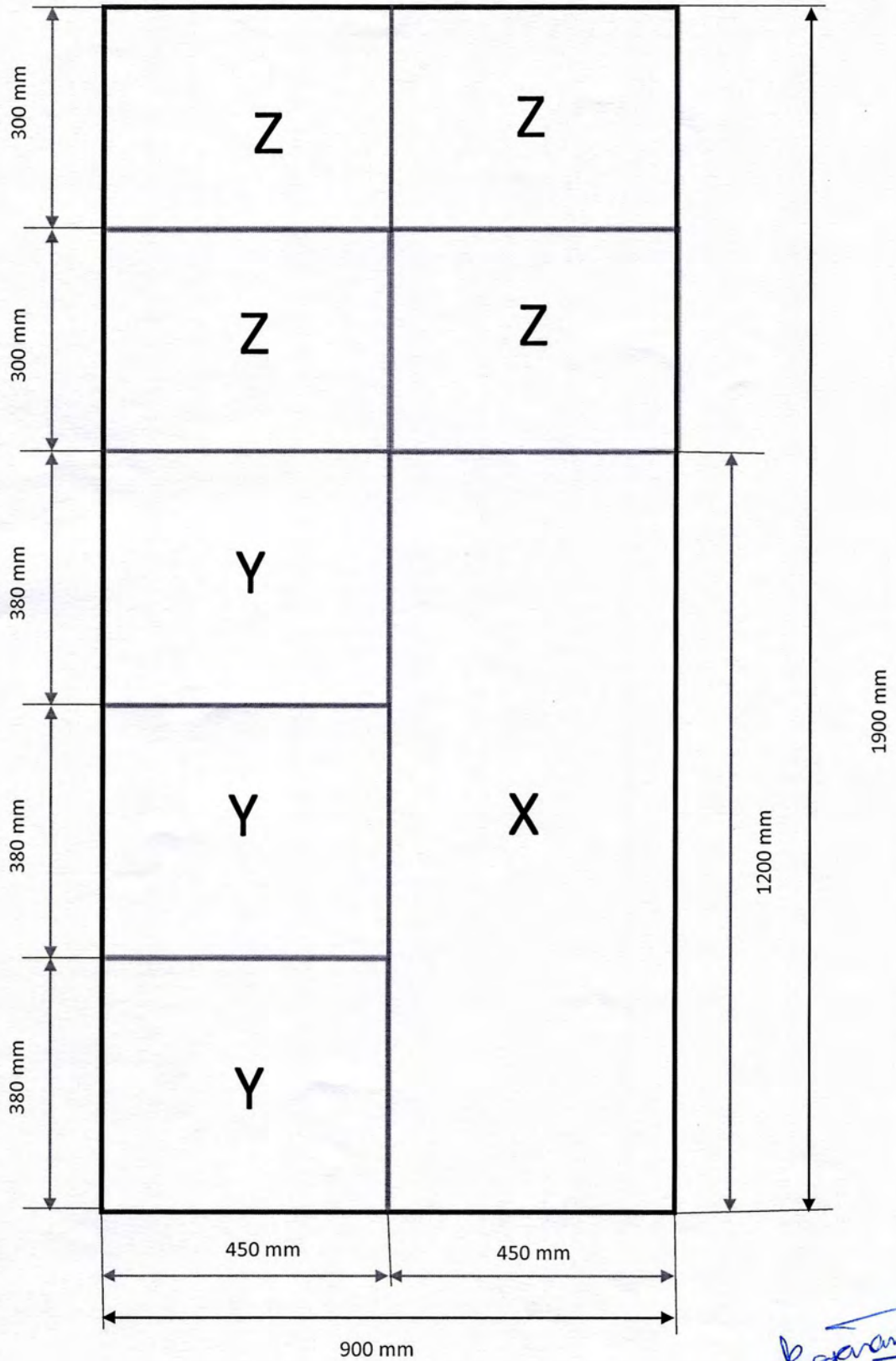
TYPE	A	B	C	D
TYPE-I	900	450	900-02 Nos	900
TYPE-II	900	450	900-03 Nos	900

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## SKETCH 2

### RACK ARRANGEMENT FOR HEAVY DUTY OPTIMIZER



*M. M. M.*

*Agarwal*

ALL DIMENSIONS OF SHELVES ARE INNER DIMENSIONS AND APPROXIMATE