



PPX-DABG DEPARTMENT  
BHARAT HEAVY ELECTRICALS LIMITED  
HEEP: HARDWAR-249 403 (Uttarakhand)  
FAX: +91 1334 226462  
TEL: +91 1334 28 5462  
E-mail: akshukla@bhel.in

Ref: PPX-DABG/EOI/23-04/06

Date: 12/03/2024

**Notice Inviting Tender for empanelment of Indian manufacturers for design, manufacturing, testing and supply of complete assembly of Ammunition Lower Hoist equipment designed for lifting of AMMUNITION of Super Rapid Gun Mount (SRGM) manufactured by BHEL**

Bharat Heavy Electricals Limited (BHEL), a leading Central Public Sector Enterprise of Govt. of India company which is an integrated power plant equipment manufacturer and one of the largest engineering and manufacturing organizations in India, catering to the core infrastructure sectors of Indian economy viz. energy, transportation, industry, non-conventional energy and Defence. BHEL has been in the business for more than 59 years and has supplied more than half of power producing equipment installed in the country. Defence and Aerospace Business Group of Heavy Electrical Equipment Plant (HEEP), one of the major manufacturing units of BHEL located at Haridwar, Uttarakhand, is manufacturing Naval Guns for Indian Navy since 1994. **We are looking for reputed Indian manufacturers for design, manufacturing, testing and supply of complete assembly of Ammunition Lower Hoist equipment designed for lifting of AMMUNITION of Super Rapid Gun Mount (SRGM) being manufactured by BHEL.**

The offers received will be technically evaluated by BHEL & successful shortlisted parties will be asked to submit their detailed Techno-Commercial offers through formal NIT/Enquiry, for our future requirements. Vendors shall confirm that there is no deviation with respect to BHEL Specifications. However, deviations, if any, are to be listed as a separate attachment. The offers that do not meet the substantial requirements of our specifications are liable to be ignored.

**Documents as per Annexure -2 (enclosed) are to be necessarily filled and submitted along with the technical offer.**

Only Technical BID is to be submitted along with the documents mentioned above. The envelope containing the offer shall be duly sealed and super scribed as **“Technical Offer for design, manufacturing, testing and supply of complete assembly of Ammunition Lower Hoist equipment designed for lifting of AMMUNITION of Super Rapid Gun Mount (SRGM) against Reference No. PPX-DABG/EOI/23-24/06, SUBMITTED BY (Name of company)”**.



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The last date for submission of Technical offers is **02/04/2024**. The Technical Offers complete in all respect must be addressed to

HEAD OF MATERIAL MANAGEMENT,  
Heavy Electrical Equipment Plant,  
Bharat Heavy Electricals Limited,  
HARIDWAR-249403 (Uttarakhand), INDIA.

Technical offers should reach before 13:45 Hrs (IST) of closing date of NIT. Late offers will not be considered in any case. BHEL will not be responsible for any type of postal delay / incomplete information from vendor. For any further clarifications, feel free to contact the undersigned.

(Ashutosh Shukla)  
DY MANAGER (PPX-DABG)



**DEFENCE ENGINEERING DEPARTEMENT  
DEFENCE AND AEROSPACE BUSINESS GROUP  
HEEP, BHARAT HEAVY ELECTRICALS LIMITED, HARIDWAR (UK)**

**Ref no.:** DABG/DPE/EOI/ALH Rev.00

**Date:** 12/03/2024

**Expression of Interest for Empanelment of Indian manufacturers for design, manufacturing, testing and supply of complete assembly of Ammunition Lower Hoist equipment designed for lifting of Ammunition of SRGM.**

**Introduction**

This Expression of Interest (EOI) seeks response from prospective Indian vendors who are capable of manufacturing, testing and supply of Ammunition Lower Hoist equipment designed for lifting of Ammunition of SRGM. The complete assembly of Ammunition Lower Hoist equipment includes Upper Station fabrication and its electrical, Intermediate duct, lower station fabrication and its electrical, main cabinets and electrical cables as per general standards of defence industry and are willing to associate with Bharat Heavy Electricals Limited (BHEL) – HEEP, Haridwar.

Bharat Heavy Electricals Limited (BHEL), is a Central Public Sector Enterprise of Govt. of India company which is an integrated power plant equipment manufacturer and one of the largest engineering and manufacturing organizations in India, catering to the core infrastructure sectors of Indian economy viz. energy, transportation, industry, non-conventional energy and Defence. BHEL has been in the business for more than 59 years and has supplied more than half of power producing equipment installed in the country.

**Broad Scope**

Design, manufacturing, inspection & testing and packing & supply of complete assembly of Ammunition Lower Hoist equipment which includes Upper Station fabrication and its electrical, Intermediate duct, lower station fabrication and its electrical, main cabinets and electrical cables including material sourcing from approved sources as per BHEL documents. Brief details and snap shots of Upper Station, Intermediate duct, lower station, main cabinets and electrical cables are attached as Annexure-1.

There is a requirement of approx. more than 10 **Ammunition Lower Hoist equipment.**

BHEL presently intends to empanel the suitable Indian vendor for manufacturing these component (s) as per the response received from vendors.

Interested Parties having prior experience of manufacturing of similar components & proven manufacturing and machining capabilities are requested to submit their response along with required documents (**Annexure-2**) latest by **02/04/2024**



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**Details of parts of Ammunition Lower Hoist equipment (3 steps):**

1. Upper Station is located in the loading site. It includes chain driving sprocket, cartridge retaining levers, safety hook, reduction gear drive, driving electric motor(4.5KW), hand control device, control tachometer, synchro box, control box, proximity switches, foot control lever etc.
2. Intermediate Duct Section includes cartridge guiding parts and cartridge lifting chain etc.
3. Lower Station is located in the Ammunition Room. It includes the Carrying Structure, the Lower Support the Junction Box, the Light Indicator etc.
4. Upper Station Electrical Installation.
5. Lower Station Electrical Installation.
6. Connection Cables.
7. Main Cabinet including protection fuses for auxiliary circuits, control & logic modules, connectors, main transformers, circuit breakers, filters, PCB's etc.

**Experience in following is desired from probable vendor:**

1. Experience in designing customized electronic circuits, electrical equipment's, control module and logics.
2. Experience in system integrator and/or manufacturing of electromechanical systems.

**Scope of Work:**

1. Design
  - a) Upper station – An option to redesign the reduction gear drive, driving electric motor(4.5KW), hand control device, control tachometer, synchro box, control box, proximity switches etc.
  - b) Electric/Electronic system.
    - Main cabinet is connected to 440V - 60Hz primary power supply.
    - Control Panel installed on the Upper Station.
    - Junction box Lower Station
    - Light Indicator installed in the Lower Station • Upper and Lower Station Interlocks.
  - c) Control & logic modules for safe automatic and manual operation of ALH.
  - d) Detailed manufacturing drawings of all mechanical items, electric systems, electric/electronic circuits, control & modules and flow chart for operation of ALH, based on basic GA drawings, schemes and & P & I diagrams.
2. Manufacturing and/or system integrator:
  - a) Upper station.
  - b) Intermediate duct.
  - c) Lower station.



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- d) Main cabinet.
  - e) Electronic circuits, controls and logic modules of ALH.
  - f) All items required for assembly.
3. Assembly and testing
- a) Complete assembly of ALH for automatic operation as per IN and BHEL specifications.
  - b) Complete assembly of ALH for manual operation as per IN and BHEL specifications
  - c) Routine test, type test and special test for electrical and electronics items as per EMC/EMI/ET with latest amendment.
  - d) Routine test, type test and special test of ALH for automatic and manual operation as per IN and BHEL test schedule/quality plan.
  - e) Demonstration or acceptance test of operation of ALH as per BHEL specifications.
4. Safety
- a) ALH should be safe while lifting the cartridge to prevent serious harm to operators and damage to equipment/ship/SRGM.
5. Training for operation and maintenance of ALH.

The prospective vendor will be required to sign Framework confidentiality agreement cum undertaking (FCA) & complete the Supplier Registration (online - <https://supplier.bhel.in/>, PMD category - Description "Components / Assemblies of SRGM for indigenisation & PMD no: DF155). The Supplier Registration Form (SRF) duly filled will be assessed for manufacturing capability, quality systems being followed, organizational soundness and financial worthiness.

In case any clarification is needed, parties may contact as per following details:

1) For commercial queries

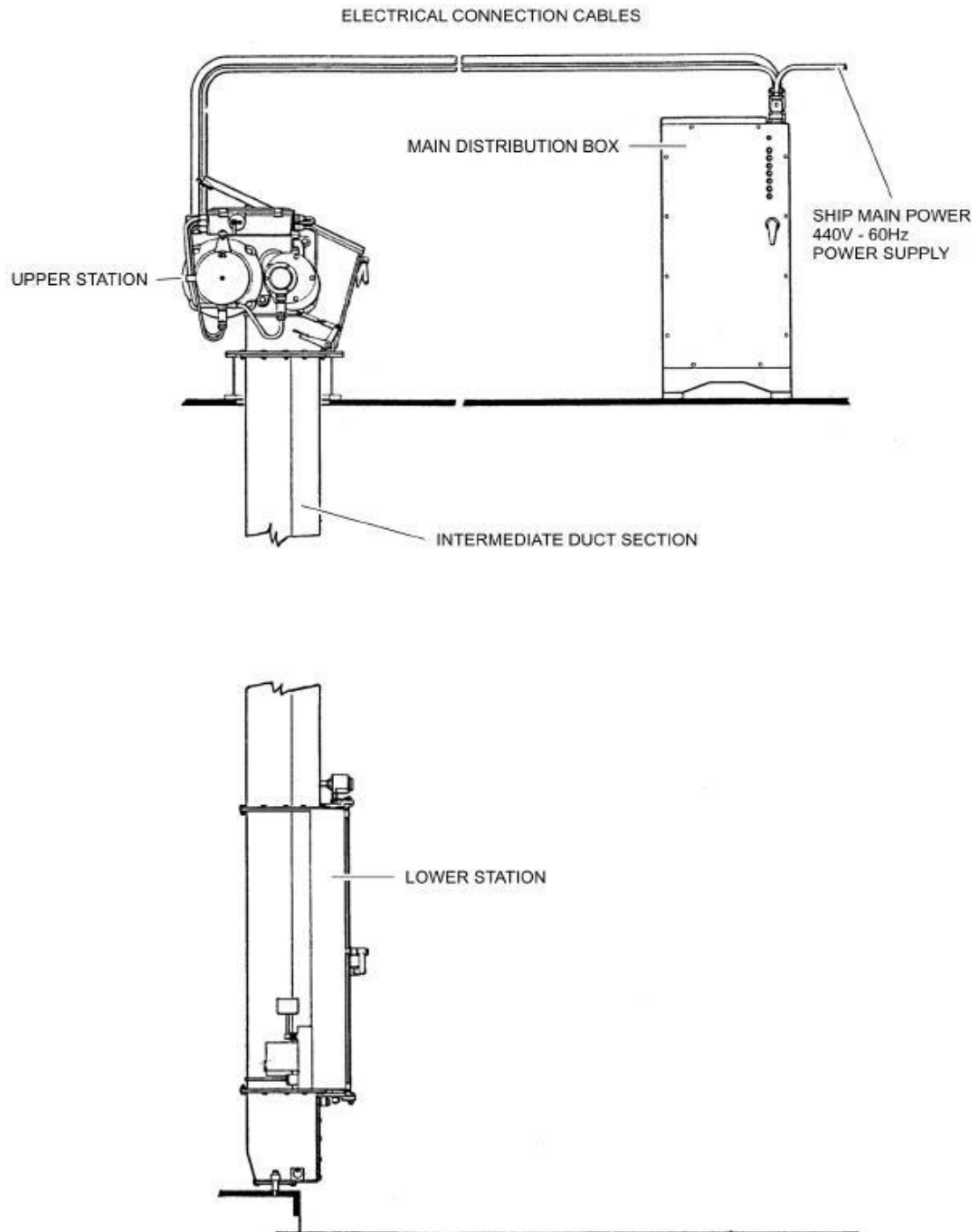
**Ashutosh Shukla**  
Defence and Aerospace Business Group,  
Heavy Electrical Equipment Limited,  
Heavy Electricals Limited (BHEL), Ranipur,  
Haridwar, Uttarakhand.  
M:7893845256 Emailid akshukla@bhel.in

2) For technical queries

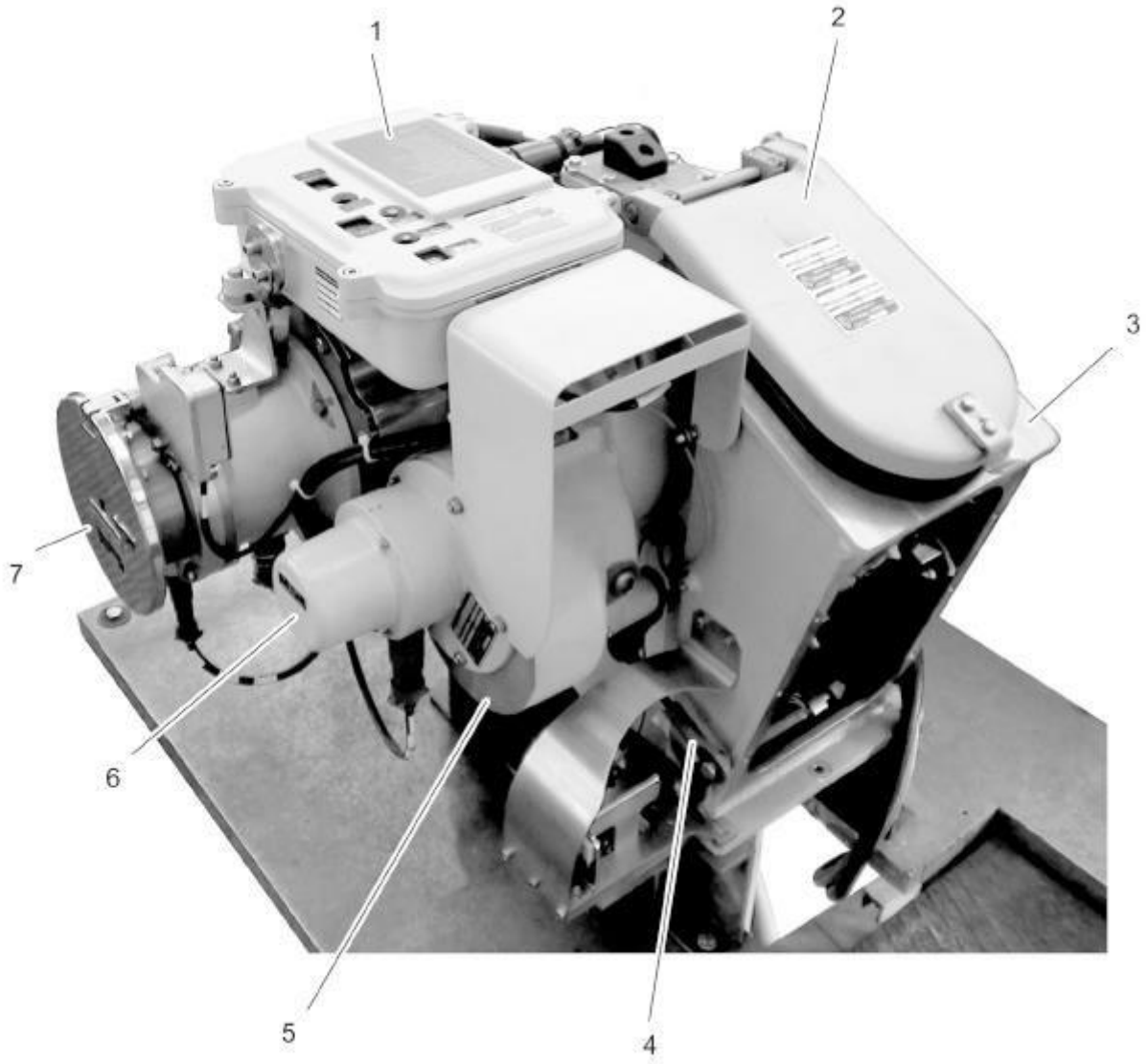
**Chaudhary Pratap Singh, Manager**  
Defence and Aerospace Business Group,  
Heavy Electrical Equipment Limited, Bharat  
Bharat Heavy Electricals Limited, Ranipur,  
Haridwar, Uttarakhand.  
M:8004947894  
chaudharypratap@bhel.in

Annexure-1

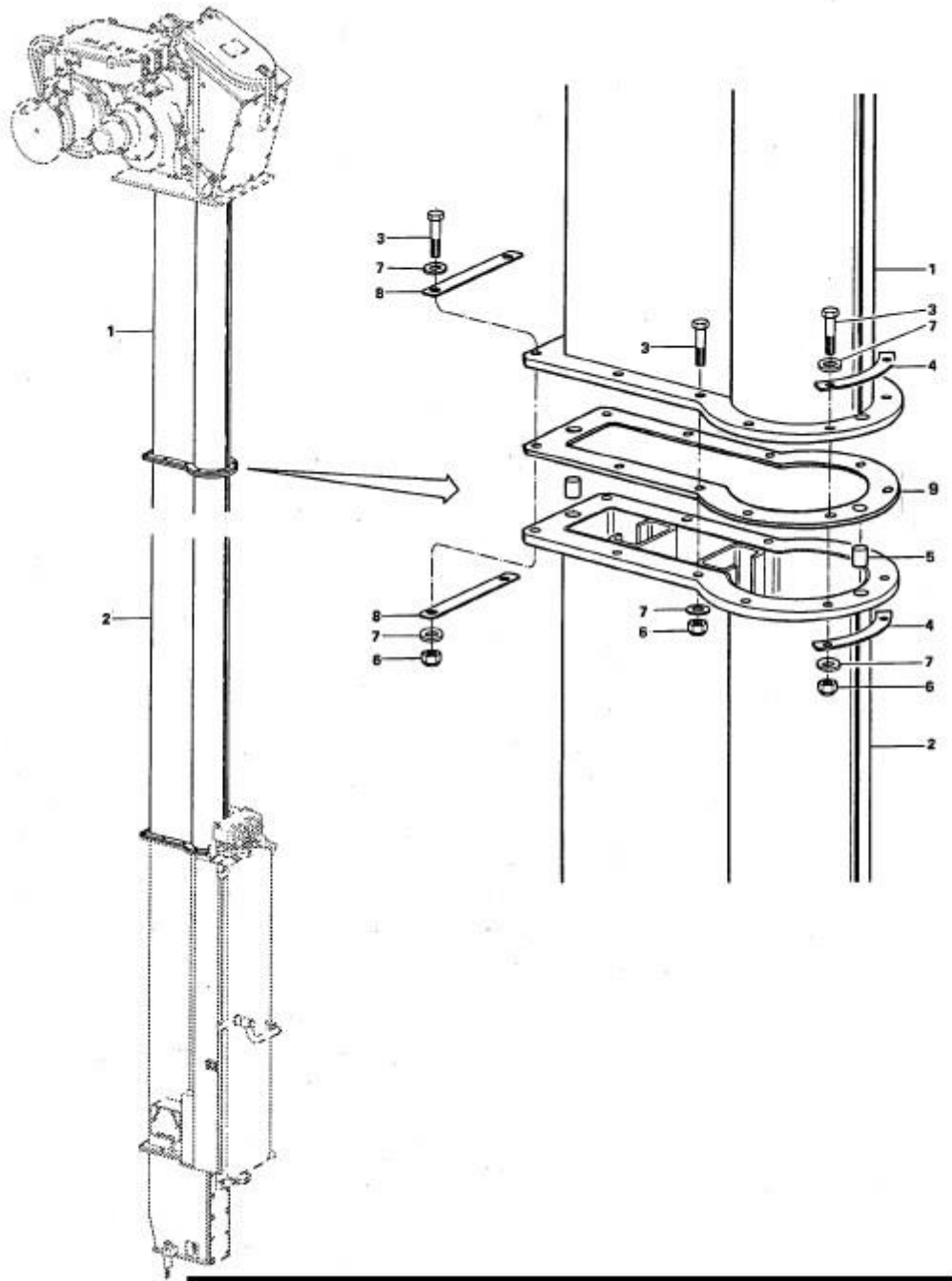
Exploded view of Upper Station, lower station and main cabinets of Ammunition  
Lower Hoist equipment



**Exploded view of upper station of Ammunition Lower Hoist equipment**

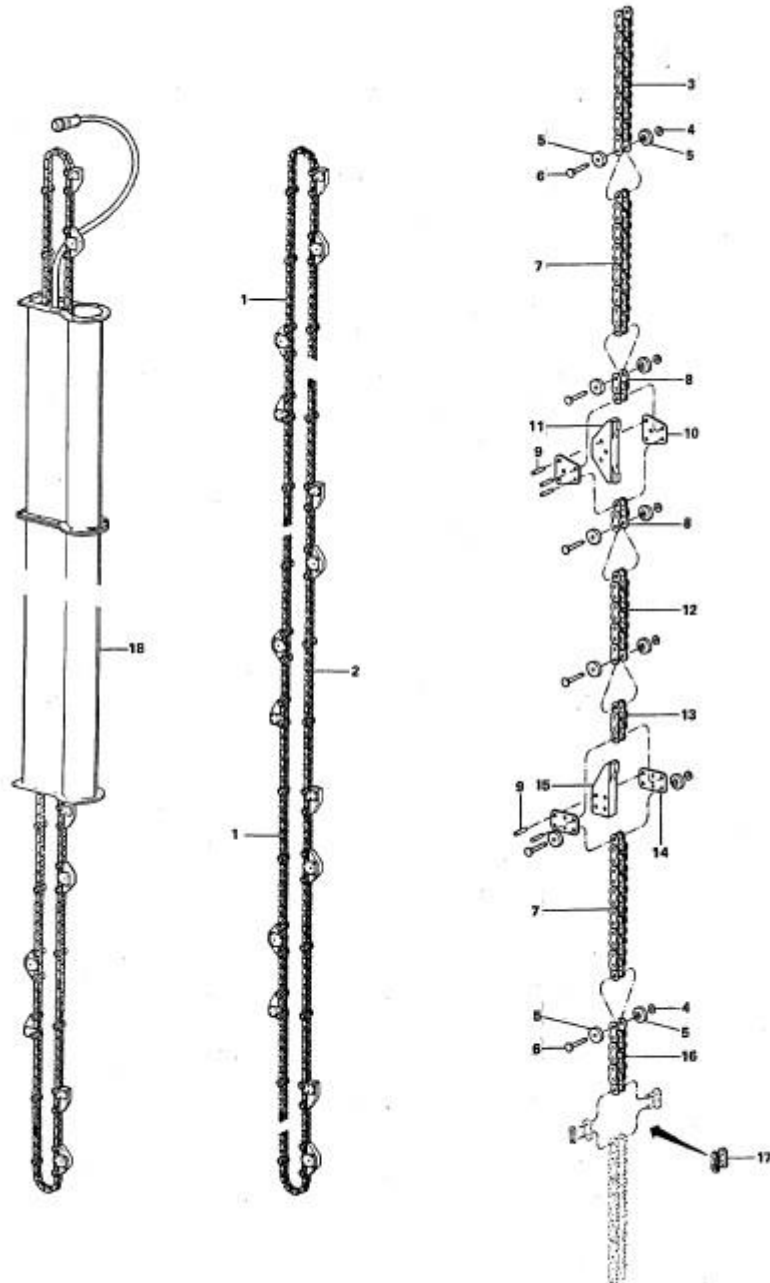


**Intermediate duct of Ammunition Lower Hoist equipment**

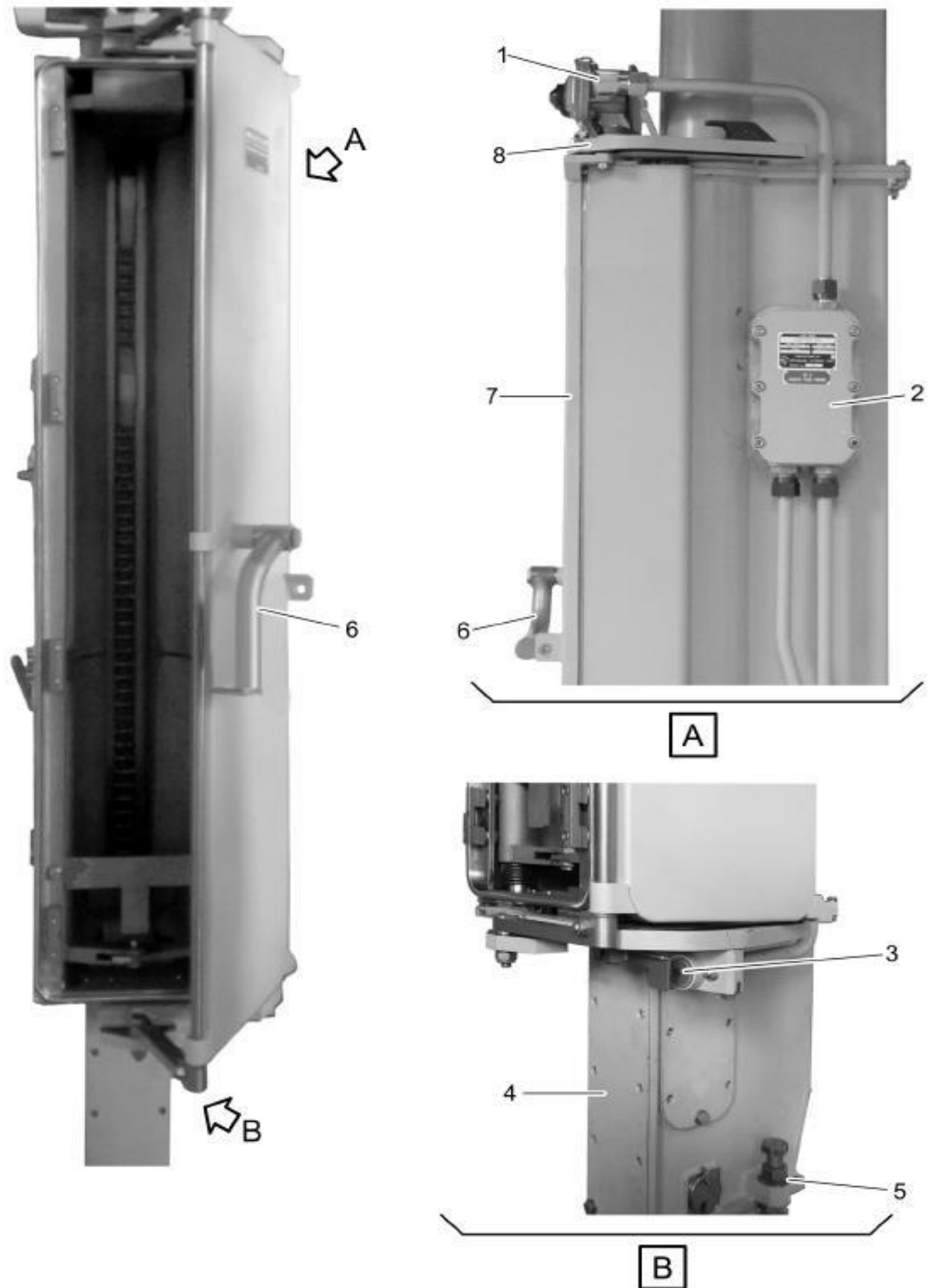




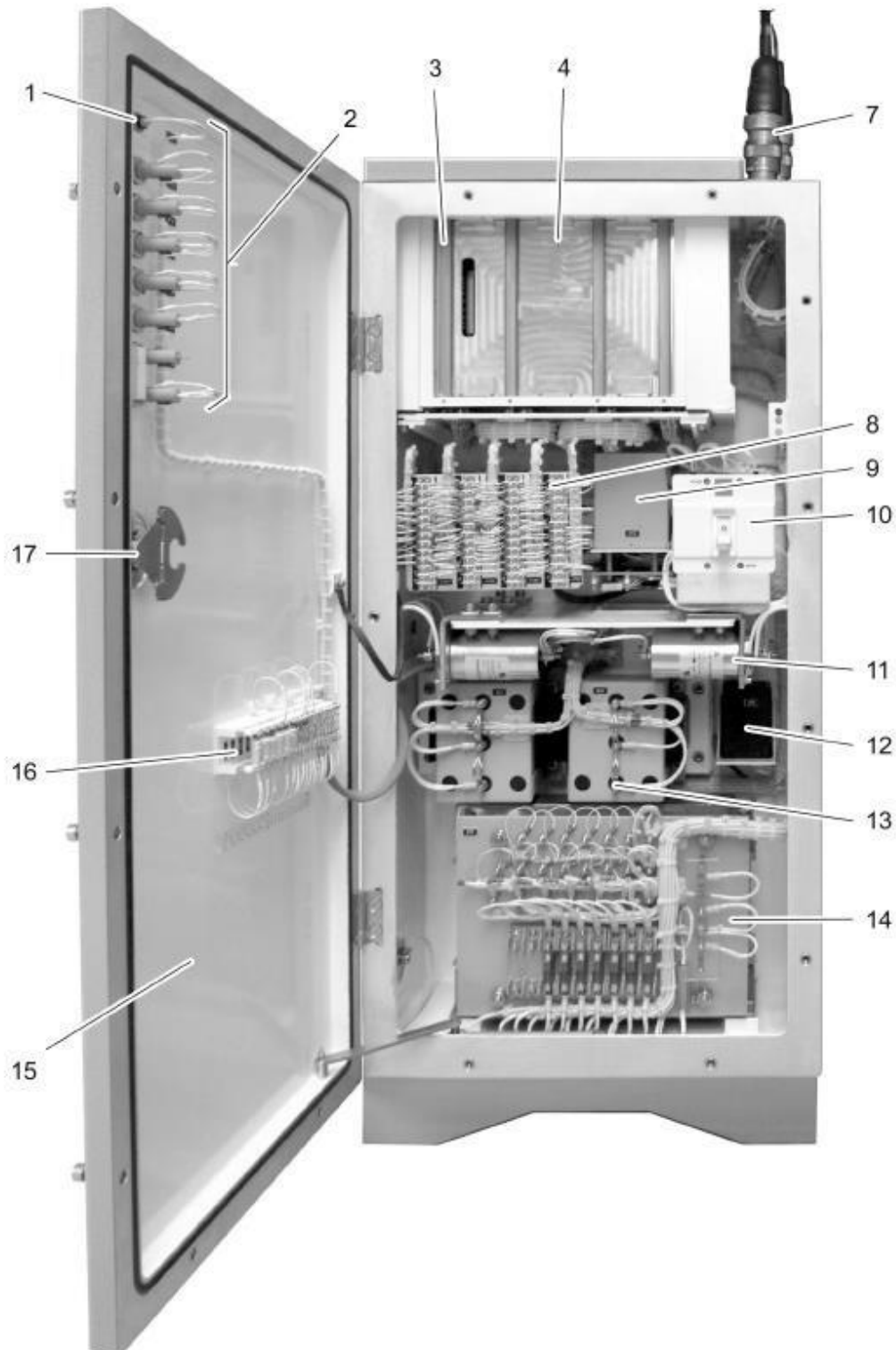
**Cartidge Lifting chain duct of Ammunition Lower Hoist equipment**



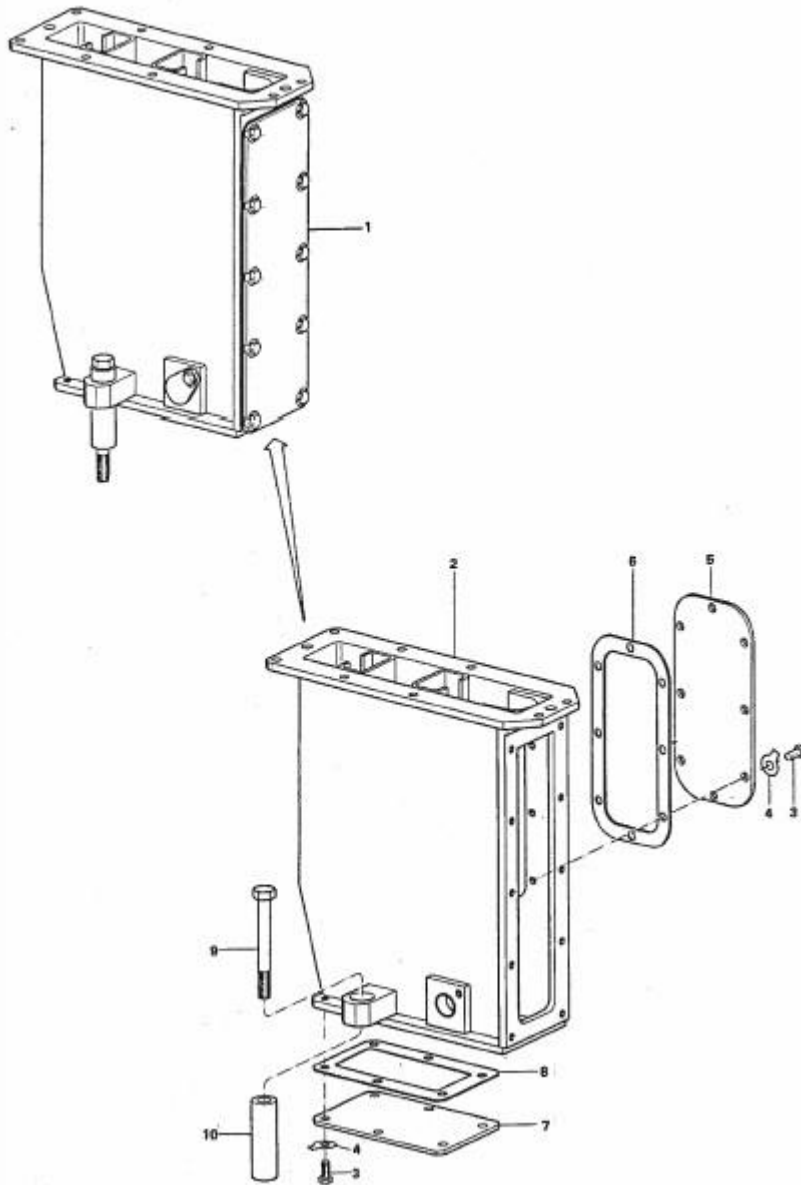
**Exploded view of Lower station of Ammunition Lower Hoist equipment**



**Exploded view of Main Cabinet of Ammunition Lower Hoist equipment**



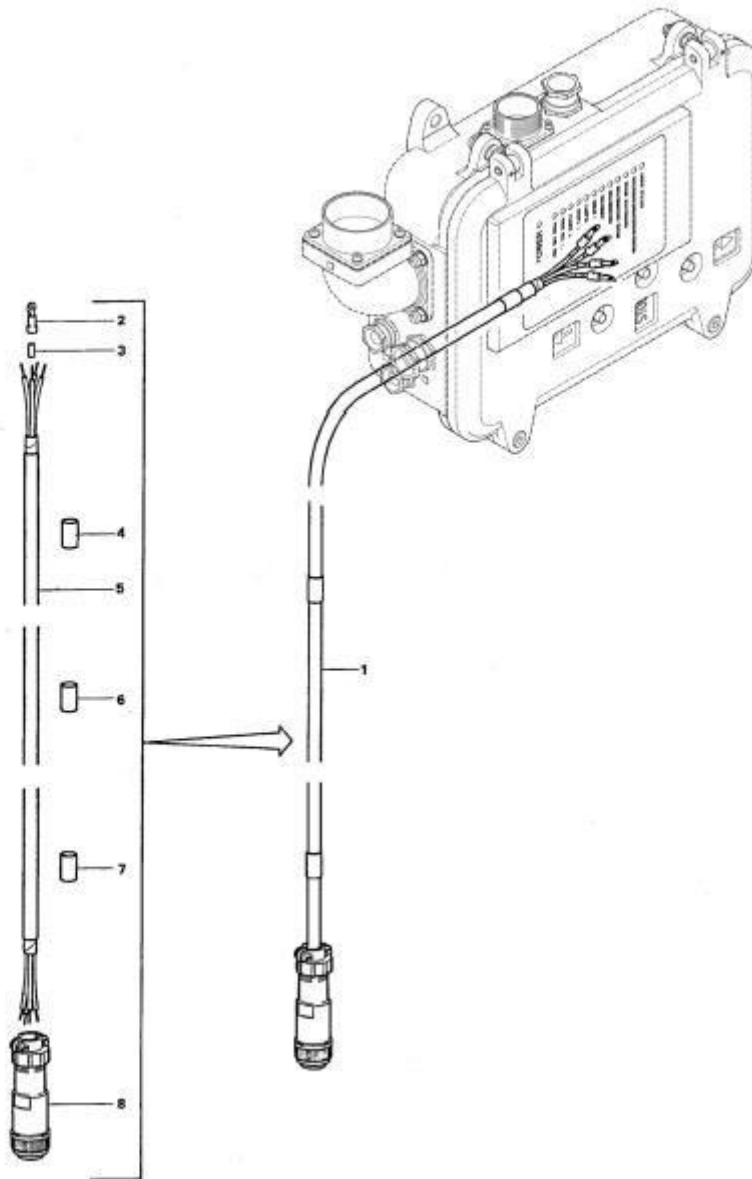
**Exploded view Lower support of Ammunition Lower Hoist equipment**



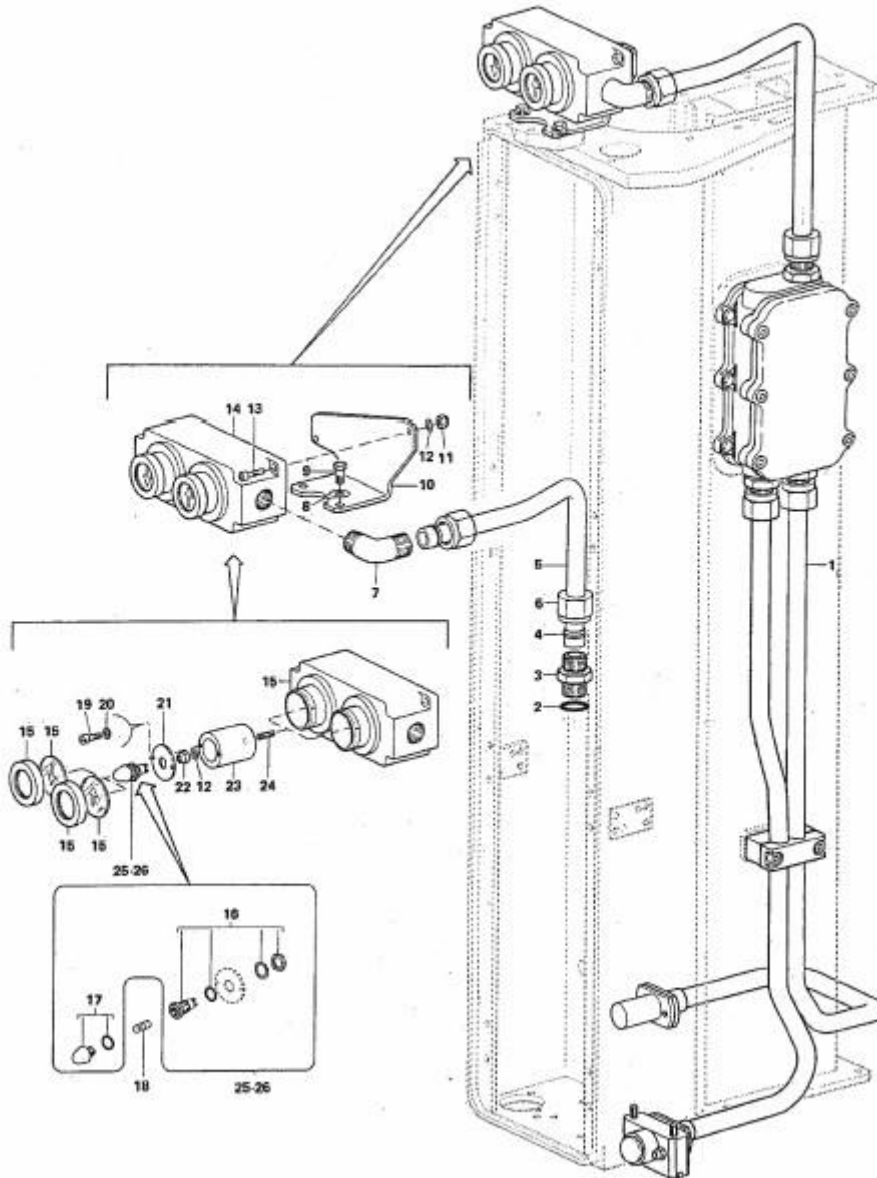


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**UPPER STATION, ELECTRICAL INSTALLATION**



**LOWER STATION, ELECTRICAL INSTALLATION**





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**Annexure-2**

**LIST OF DOCUMENTS**

1. Organisational Information – Name and Correspondence Address of the Firm/ Company to be registered complete with contact number and email id.
2. Registration particulars – If registered with any of the BHEL Units
3. Manufacturing Facilities:
  - a. List of Manufacturing Facilities/Equipment's for fabricated ALH items, if In-house facilities are not available, vendor details/source of the same to be provided.
  - b. List of Manufacturing Facilities/Equipment's for Designing customized electronics and electrical items of ALH, if In-house facilities are not available, vendor details/source of the same to be provided.
  - c. List of vendor details/source for wiring of electrical controls, transformers, controls, command logic circuits, proximity switches, cables, gear drive unit, motors etc.
  - d. List of facility for integration & testing of similar equipment as per BHEL requirement.
4. Inspection and Testing facilities – List of Inspection & Testing facilities / Equipment available.
5. Experience related to electromechanical design of similar equipment's.
6. Details of supplied similar equipment along with photographs.
7. Unpriced PO copies executed for similar equipment.
8. Standard Quality Plan.
9. Quality Management System - Whether Supplier is ISO 9001, ISO 14000, OHSAS – 18000 Certified.
10. List of Enclosures (Brochures, Catalogues etc.)
11. Financial Information