

Heavy Drop System for C130 & C17 Aircrafts

INTRODUCTION

Heavy Drop System for C130 & C17 aircraft is used to Paradrop of Military Payloads in the areas in accessible by road or in case of urgent deployment of equipments/stores. The system has been developed by ADRDE Agra to cater the futuristic needs of airborne forces. This system comprises of Platform sub-system & Parachute sub-system. The stores are lashed over a pallet structure called Platform. The airdrop platform serves as the base on which supplies and equipment are restrained. This platform also supports the load during the extraction, parachute deployment, suspension, and recovery phases. The airdrop platform is used for low-velocity airdrop. The extraction method is used for platform loads delivered by low-velocity airdrop on platform.

This system has been designed to meet following operational requirements:-

- All up Mass (AUM) - up to 19050 kg
- Compatible Aircrafts - C-130 J & C17 Globemaster
- Parachute Size - 100 ft dia (up to cluster of 8 canopies)
- Extractor parachute - 15 ft dia, 22 ft dia & 28 ft dia
- Platform length - 12 ft, 16 ft, 20 ft, 24 ft, 28 ft, 32 ft length
- Drop Speed - 140- 145 Knots(IAS)

The system meets various airdrop requirements of C-130 & C-17 aircrafts. These systems have been subjected to various qualification tests to check the functionality & structural integrity at maximum load conditions. After completion of qualifications tests, system has been successfully subjected to extensive flight trials. All the trials were conducted as per the requirements laid down by CEMILAC.

OPERATIONAL & SHELF LIFE:

- (1) Shelf life of Platform System & related metallic items : 15 Years
- (2) Shelf life of Parachute system & related textile items: 12 years
- (3) Operational life of Consumable items: 1 drop life

TRANSPORTABILITY:

HDS is compatible with K-Loader or any other loader having similar cargo handling system.



Fig 1: HDS during Aircraft Loading



Fig 2: HDS secured inside aircraft



Fig 3: Fully deployed HDS during descent



Fig 4: HDS after landing

1. Interested Companies/industries are requested to apply against this EoI to the following address:-

**To,
Director
Aerial Delivery Research and Development Establishment (ADRDE)
PO Box 51, Station Road
Agra Cantt – 282001
Phone : 0562 - 2258200/201/202
Fax: 0562- 2251677 / 2258203
Email : director[dot]adrde[at]gov[dot]in**

2. A copy of interest may be sent to the following address without any attachment:-

**To,
The Director,
Directorate of Industry Interface & Technology Management (DIITM),
Room No. 447, DRDO Bhawan Rajaji Marg, New Delhi- 110 011
Email- diitm.hqr@gov.in
Phone No. 011-23013209
Fax No.011-23793008**

All industries interested in seeking ToT are requested to apply in the format given below along with supporting documents (as applicable). Kindly provide reference of page no. of supporting document in the relevant field also. The list of documents to be attached is provided in Annexure - I.

PART-1

General Information

1	Name of the Technology requested for Technology Transfer (Technology name and concerned Lab, Category)	
2	Name of the industry/ organization	
3	Complete Address and other details	
	Registered Office State Phone No Fax Email Website	
	Factory State Phone No Fax Email Website	
4	Point of Contact Name Designation Address Mobile No Ph No Email ID	
5	NAME OF CMD/ MD /PARTNERS/ PROPRIETOR/ etc Name Designation Address Mobile No Ph No Email ID	
6	Date of Incorporation of company	
7	Foreign Direct Investment in company (if any in %)	
8	Shareholding pattern	
9	Turn over as per Audited Balance Sheet for the	

	<p>preceding three years.</p> <p>Year _____</p> <p>Year _____</p> <p>Year _____</p>	
10	<p>Annual budget for R&D during last three years (if any)</p> <p>Year _____</p> <p>Year _____</p> <p>Year _____</p>	
11	<p>Income Tax returns for the preceding three years period</p> <p>Year _____</p> <p>Year _____</p> <p>Year _____</p>	
12	<p>Nature of company</p> <p>DPSU, Private Limited, Public Limited, Partnership, Proprietary, Ex- Serviceman Unit</p>	
13	<p>Category of industry</p> <p>Large Scale, Medium Scale, Small Scale, Micro, Startup</p>	
14	MSME Registration No	
15	Certificates of registration as a manufacturing unit, if any.	
16	If Startup, DPIIT Registration No	
17	UDYOG AADHAR No	
18	PAN Number	
19	Details of Industrial license for defence manufacturing issued by DPIIT (if any)	
20	Details of PESO license (if any)	
21	GST Number	
22	<p>Nature of business</p> <p>Manufacturing/ Sole Selling or Authorized Agent/ Assembler/ Traders/ Dealer/ Processor/ Repacker/ Others</p>	
23	<p>Details of current products and services</p> <p>Products and services Supplied (please specify Govt/ Domestic market/ Export)</p>	
24	Record of past performance (e.g., Supply orders executed against of Ministry of Defence orders, Public	

	Sectors and Paramilitary Forces, if any).	
25	Details of registration with NSIC / SSI, DGS&D, other Defence Department, other Govt. Dept, membership of FICCI/ASSOCHAM/CII or other Industrial Association (Attach relevant copies of registration letters)	
26	Have you already taken any technology from DRDO (If yes, give details attaching separate sheet) Name of the Technology, Lab, Year, License number & Status	
27	ISO/ ISI certification or any other certification (If yes, give details)	
28	Relevant clearances form the authorities/ ministries (if any)	
29	Capacity and capability to undertake developmental work and to accept attendant financial and commercial risks.	
30	Capacity/capability to market the product through the marketing network, sales and service network, reliability to maintain confidentiality.	

PART-2

2.1.1 Infrastructure and other Information

1.1 Total area of factory

Covered (m²),
Uncovered (m²),
Bonded space available (m²)

2.1 Ownership of factory

Self-owned, partnership, rental

3.1 Electric power

Sanctioned
Installed
Standby (if any)

4.1 Availability of adequate infrastructure (List of machines and their production capacities) and technical expertise

5.1 Name of bank & A/c No

Name of bank
A/c type
A/c no
Address of the bank
Phone: Email:

Appendix 'A' Details of current products:

Sl.no	Type	Description	Licensed/installed capacity	Annual production for preceding 3 years
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Appendix 'B' Details of foreign collaboration, if any

Sl.no	Product	Name & address of collaborator	Year	Remarks
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Appendix 'C' Details of products developed for services

Sl.no	Nomenclature of stores	Order no and date	Remarks
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Appendix 'D' Please give details of important facilities & infrastructure as per following format for:

- Production
- Unconventional, special m/c
- Testing & quality control facilities

Sl.no	Description of m/c	Make & model	Qty	date of purchase	Remarks
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Appendix 'E' Furnish the following details with relevant certificates and documents

- R&D facilities available :
- Inspection quality control of raw material components :
- Assistance from central agency for testing / calibration etc. :
- laboratory and drawing office facility :

Appendix 'F' Principal customers:

Sl.no	Name & address	S.O No. & date	Date of last supply	Products supplied	Value
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Appendix 'G' Future plan (if any) in respect of expansion programme installation of additional machines/ test facilities etc.

Appendix 'H' Name of the technology requested for transfer (give self-assessment of your capability to absorb the technology)

Appendix 'I' Details of employee as on date on firm's pay roll

PERMANENT				
Category	Post Held	Number	Qualification	Total Service
Technical	Prod. Manager Q.C. Manager Supervisor Testing Staff (Qc) Skilled workers Unskilled workers, etc.			
Administrative	Purchase Manager Accounts Officer Office Superintendent Clerical Others etc			

TEMPORARY				
Category	Post Held	Number	Qualification	Total Service
Technical	Prod. Manager Q.C. Manager Supervisor Testing Staff (Qc) Skilled workers Unskilled workers, etc			
Administrative	Purchase Manager Accounts Officer Office Superintendent Clerical Others, etc			

DECLARATION :

I / we confirm that the information furnished in Part 1 & 2 above is correct. In the event of any information given by me / us is found incorrect / false at any time, I / we understand our EoI for ToT will be cancelled/ rejected without notice, beside any other appropriate action against me / us.

Industry seal

Authorized signatory

Name(s) in capital
designation and seal of authorized
signatory

dated:

Place:

Annexure -I

List of Support documents to be attached with EoI:-

- (a) Memorandum and Articles of Association (Should be incorporated as per Indian Companies Act, as amended time to time).
- (b) Certificates of registration as a manufacturing unit, if any.
- (c) Audited Balance Sheet for the preceding three years.
- (d) Income Tax returns for the preceding three year period.
- (e) Details of shareholding/ownership pattern especially foreign partners/shareholders, foreign employees, directors, etc. The company must adhere to the prevailing Govt of India policies and regulations on Foreign Direct Investment (FDI)/ DIPP norms as applicable.
- (f) Annual budget for R&D during last three years.
- (g) Numbers and details of IPR or patents, etc., held by the company.
- (h) Number of technically or professionally qualified personnel.
- (i) Record of past performance (e.g., Supply orders executed against of Ministry of Defence orders, Public Sectors and Paramilitary Forces, if any).
- (j) Availability of adequate infrastructure (List of machines and their production capacities) and technical expertise.
- (k) List of Testing and Support equipments.
- (l) ISO/ ISI certification or any other certification.
- (m) Relevant clearances form the authorities/ ministries (if any).
- (n) Capacity and capability to undertake developmental work and to accept attendant financial and commercial risks.
- (o) Capacity/capability to market the product through the marketing network, sales and service network, reliability to maintain confidentiality.

- (p) PESO and DPIIT license for explosive handling if ToT is for high energy Material, explosives, propellants, and component/ system dealing with it etc.
- (q) Under taking form company seeking ToT that none of its Directors, Independent Directors, non-executive Directors, Key management personnel are involved in any corrupt practices, unfair means and illegal activities.
- (r) Details of the industries license for Defence manufacturing be provided by the industry seeking ToTs.
- (s) Application cum Industry Assessment Form.