Military Combat Parachute System

ADRDE has developed 'Military Combat Parachute System (MCPS)' as per JSQR No: 1670-1 (revised in 2022) for the Tri Services and Special Frontier Force. Military Combat Parachute System (MCPS) is a mode of insertion used by SF to penetrate paratroopers with combat load into designated area of operations. MCPS allows Paratroopers to jump from an aircraft and deploy their Parachutes at pre-determined Altitude, Navigate and Land Safely. MCPS system can be used in High Altitude High Opening (HAHO), High Altitude Medium Opening (HAMO) & High-Altitude Low Opening (HALO) modes as required for the particular scenario. The parachute system has been designed as per international standard and qualification test schedule (QTS) has been prepared in line with Parachute Industry Association (PIA) and approved by Centre for Military Airworthiness and Certification (CEMILAC). Accordingly, various qualification of system was carried out. Based on CEMILAC has accorded the certification of various system of MCPS.

1 MCPS Configuration

A. Parachute System i. Main Canopy Assembly ii. Reserve Canopy Assembly iii. Container with Harness iv. Carrying bag v. Automatic Activation Device (Military) vi. Double Deployment Bag for Static Line (DDBSL) vii. Bottom of container throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE D. Individual Gear	WCPS Configuration						
A. Parachute System i. Main Canopy Assembly ii. Reserve Canopy Assembly iii. Container with Harness iv. Carrying bag v. Automatic Activation Device (Military) vi. Double Deployment Bag for Static Line (DDBSL) vii. Bottom of container throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE	SI No	Syste	em Details	Design			
i. Main Canopy Assembly ii. Reserve Canopy Assembly iii. Container with Harness iv. Carrying bag v. Automatic Activation Device (Military) vi. Double Deployment Bag for Static Line (DDBSL) vii. Bottom of container throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE				Agency			
ii. Reserve Canopy Assembly iii. Container with Harness iv. Carrying bag v. Automatic Activation Device (Military) vi. Double Deployment Bag for Static Line (DDBSL) vii. Bottom of container throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE	A.	Parac	chute System	ADRDE			
ii. Reserve Canopy Assembly iii. Container with Harness iv. Carrying bag v. Automatic Activation Device (Military) vi. Double Deployment Bag for Static Line (DDBSL) vii. Bottom of container throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE		i.	Main Canopy				
Assembly iii. Container with Harness iv. Carrying bag v. Automatic Activation Device (Military) vi. Double Deployment Bag for Static Line (DDBSL) vii. Bottom of container throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE			Assembly				
iii. Container with Harness iv. Carrying bag v. Automatic Activation Device (Military) vi. Double Deployment Bag for Static Line (DDBSL) vii. Bottom of container throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE		ii.	Reserve Canopy				
iv. Carrying bag v. Automatic Activation Device (Military) vi. Double Deployment Bag for Static Line (DDBSL) vii. Bottom of container throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE			Assembly				
iv. Carrying bag v. Automatic Activation Device (Military) vi. Double Deployment Bag for Static Line (DDBSL) vii. Bottom of container throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE		iii.	Container with				
v. Automatic Activation Device (Military) vi. Double Deployment Bag for Static Line (DDBSL) vii. Bottom of container throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE			Harness				
Device (Military) vi. Double Deployment Bag for Static Line (DDBSL) vii. Bottom of container throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE		iv.	Carrying bag				
vi. Double Deployment Bag for Static Line (DDBSL) vii. Bottom of container throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE		٧.	Automatic Activation				
Bag for Static Line (DDBSL) vii. Bottom of container throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE			Device (Military)				
vii. Bottom of container throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE		vi.	Double Deployment				
vii. Bottom of container throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE			Bag for Static Line				
throw out pilot chute (BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE			(DDBSL)				
(BOC) components viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE		vii.	Bottom of container				
viii. Oxygen pocket ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE			throw out pilot chute				
ix. Radio/ Communication Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE			(BOC) components				
Communication Pocket X. HAHO seat Xi. Ruck Sack/PDB Xii. Satellite Navigation System Xiii. Magnetic Compass Xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE		viii.	Oxygen pocket				
Pocket x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE		ix.	Radio/				
x. HAHO seat xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE			Communication				
xi. Ruck Sack/PDB xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE			Pocket				
xii. Satellite Navigation System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE		X.	HAHO seat				
System xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE		xi.	Ruck Sack/PDB				
xiii. Magnetic Compass xiv. Altimeter B. High Altitude Oxygen Breathing System C. Navigation Equipment ADRDE		xii.	Satellite Navigation				
xiv. Altimeter B. High Altitude Oxygen DEBEL Breathing System C. Navigation Equipment ADRDE			System				
B. High Altitude Oxygen DEBEL Breathing System C. Navigation Equipment ADRDE		xiii.	Magnetic Compass				
Breathing System C. Navigation Equipment ADRDE		xiv.	Altimeter				
C. Navigation Equipment ADRDE	B.	High	Altitude Oxygen	DEBEL			
			•				
D. Individual Gear DEBEL	C.	Navig	gation Equipment	ADRDE			
	D.	Indiv	idual Gear	DEBEL			



Interested industries are requested to forward their Expression of Interest (EoI) (with attachments of supporting documents) to **Director**, **Aerial Delivery Research and Development Establishment (ADRDE)** with a copy to Director DIITM, DRDO HQ (no attachments are required to be forwarded to DIITM) on following address:-

Director

Aerial Delivery Research and Development Establishment (ADRDE)

PO Box 51, Station Road

Agra Cantt - 282001

Phone: 0562 - 2258200/201

Fax: 0562-2251677/2258203

E-mail: director.adrde@gov.in

Copy to

Director

Directorate of Industry Interface & Technology Management (DIITM)

Room No 447, DRDO Bhawan, DRDO HQrs, Rajaji Marg, New Delhi - 110011

Phone: 011-23013209/ 23015291

Fax: 011-23793008

Email: diitm.hqr@gov.in

All industries interested in seeking ToT are requested to apply in the format given below. Kindly fill in the fields. The list of documents to be attached is provided in Annexure – I. Kindly provide the reference of page no. of supporting document in the relevant field of form.

PART-1

General Information

(Please enclose documents in support of information provided)

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	

	preceding three years.	
	Year	
	Year	
	Year	
10.	Annual budget for R&D during last three years (if any)	
	Year	
	Year	
	Year	
11.	Income Tax returns for the preceding three years period	
	Year	
	Year	
	Year	
12.	Nature of company	
	DPSU, Private Limited, Public Limited, Partnership, Proprietary, Ex- Serviceman Unit	
13.	Category of industry	
	Large Scale, Medium Scale, Small Scale, Micro, Startup	
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.	Nature of business	
	Manufacturing/ Sole Selling or Authorized Agent/ Assembler/ Traders/ Dealer/ Processor/ Repacker/ Others	
23.	Details of current products and services	
	Products and services Supplied (please specify Govt/ Domestic market/ Export)	
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

Infrastructure and other Information

1.	Total area of factory
	Covered (m ²),
	Uncovered (m ²),
	Bonded space available (m ²)
2.	Ownership of factory
	Self-owned, partnership, rental
3.	Electric power
	Sanctioned
	Installed
	Standby (if any)
4.	Availability of adequate infrastructure
	(List of machines and their production capacities)
	and technical expertise
5.	Name of bank & A/c No Name of bank

	A/c typ	е								
	A/c no									
	Address of the bank									
	Phone:									
	Email:									
	Liliali.									
6. E	Details c	of cu	rrent pro	oduc	ets:					
S.No	Туре	Des	scription	Lic	censed/ins	talled		An	nua	I production for
				ca	pacity			pre	eced	ding 3 years
7. 🗅	Details o	of for	reign col	labo	ration, if	any				
S.No	Product Name and address of Year						ır	Remarks		
				CC	ollaborator					
8. E	Details o	of pr	oducts d	evel	oped for s	service	s			
S.No	Nome	nclat	ure of sto	res	Order	No. an	d dat	е		Remarks
f	ollowir	ng fo	ormat for	of ir:	importan	t facili	ities	& in	fras	structure as per
(a)			on entional, s	snoo	vial m/a					
(b)				•	rol facilitie	es				
S.No	Description of Make & model Qty Date of						of	Remarks		
	m/c purcha						se			

10. Furnish the following details with relevant certificates and documents

(a) R&D facilities available :

(b) Inspection quality control of raw material components

(c) Assistance from central agency for testing / calibration etc.:

(d) laboratory and drawing office facility

11. Principal customers:

S. No	Name & address	S.O No	Date of last	Products	Value
		and date	supply	supplied	

- 12. Future plans (if any) in respect of expansion programme/ installation of additional machines/ test facilities etc.
- 13. Name of the technology requested for transfer
 - (give self-assessment of your capability to absorb the technology)

14. 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				
DEC	LARATIO	<u>ON</u> :		
I / we confirm that the information In the event of any information given be any time, I / we understand our EoI fo notice, beside any other appropriate acti	oy me / us or ToT will	s is found inc be cancelled/	correct / false	e at

Authorized signatory

Name(s) in capital

Designation and seal of authorized signatory

Industry seal

Date:

Place:

List of Support documents to be attached with Eol:-

- (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.
- (I) 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.