Tele : 011-23019604
Fax : 011-23019675
Email : ce5-einc-army@nic.in

Combat Engineers Directorate/
Combat Engineers-5(B)
Integrated HQ of MoD (Army)
Engineer-in-Chief's Branch
Kashmir House
DHQ PO, New Delhi-110011

80076/RHB(Amph)/CE-5(B)

08 March 2022

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REQUEST FOR INFORMATION (RFI) FOR PROCUREMENT OF RIGID HULL BOAT (RHB) FOR INDIAN ARMY

1. Ministry of Defence, Govt of India is planning to procure approximately seven Numbers of Rigid Hull Boats (RHBs).

2. The Request for Information (RFI) consist of three parts as indicated below:-

(a) **Part I**. The first Part of RFI incorporates operational & technical characteristics and features of the RHB. The 'Response by vendors' column in the tabulated sheet to be filled in by the vendor as to whether the specified parameter is complied with or not and with any other details as applicable. Amplifications or comments to fresh inputs or changes suggested, also be brought out in order to facilitate review of the operational requirements.

(b) **Part II**. The second part of RFI states the conditions to be acceptable to vendors and methodology of seeking response from vendors. Submission of incomplete response format could render the vendor liable for rejection.

(c) **Part III**. Criteria for qualification in Buy (Indian-IDDM)/ Buy (India)/ Buy & Make (Indian).

PART I

4. **Intended Use of the Equipment (Operational Requirement)**.

(a) **Employment**. The RHB(Amph) are to be deployed for surveillance, patrolling & interception at sea and over water bodies, including as akin to the Creek areas.

(b) **Characteristics of RHB(Amph)**. The RHB(Amph) system shall be designed to drive in/ out of water bodies without the need for any jetty. It should be operable in water at minimal draughts, in unknown/ varying terrain conditions and also at high speeds. It should be rugged and versatile, so as to facilitate seamless

execution of operations such as patrolling, fast attack/ interception, etc across a varying matrix of terrain and operating conditions. The RHB(Amph) should be designed to ensure safety of the operator, reduction of operator fatigue whilst achieving the standards for rugged military use.

4. **Important Technical Parameters**. The RHB shall comprise of the following sub systems:-

(a) Overall length between 9 to 11 Metres.

(b) Draught less than 0.5 Metres.

(c) Maximum speed of not less than 40 Knots in water.

(d) Hull of Marine Grade Aluminium/ equivalent material.

(e) Carriage capacity of 12 armed personnel with battle loads (including crew).

(f) Adequate ballistic protection.

(g) Motorised, retractable and steerable wheels.

5. Vendors should confirm that the following conditions are acceptable:-

(a) The solicitation of offers will be as per 'Single Stage - Two System'. It would imply that a 'Request for Proposal (RFP)' would be issued soliciting the technical and commercial offers together, but in two separate sealed envelopes. The validity of commercial offer would be at least 18 months from the date of submission of offers.

(b) The technical offers would be evaluated by a Technical Evaluation Committee (TEC) to check its compliance with RFP.

(c) The equipment of all TEC clared vendors would be put through a 'Field Evaluation Trial' in India on a "No Cost No Commitment" basis. A staff evaluation would be carried out by Indian SHQ to analyse the result of field evaluation and shortlist the equipment for introduction into service.

(d) Amongst the vendors who have been cleared by the TEC, a Commercial Negotiation Committee (CNC) would decide the low cost bidder (L1) and conclude the approved contract.

(e) Vendor would be bound to provide product support for time period specified in the RFP, which includes spares and maintenance tools/ jigs/ fixtures for field and component level repairs.

(f) Vendor would be required to accept the general conditions of contract given in the Standard Contract Document at Chapter VI of DAP 2020.

(g) Acceptance of terms of payment as per DAP 2020.

(h) **Integrity Pact (if applicable)**. An integrity pact alongwith appropriate Bank Guarantee is a mandatory requirement as per Appendix I to Appendix O of Schedule I of DAP 2020.

(j) **Performance/ Warranty Bonds**. Performance-cum-Warranty Bond both equal to 3% value of the contract inclusive of taxes and duties or as amended from time to time is required to be submitted after signing of contract.

PART II

6. **Procedure for Response**.

(a) Vendors must render response as sought at **Appendix A to D** to this RFI. Apart from filling details about company, details about the exact product meeting technical specifications should also be carefully filled. Additional literature on the product can also be attached with the form.

(b) Any queries on the RFI be posted on email ce5-einc-army@nic.in latest by **25 Mar 2022**.

(c) A vendor interaction is proposed on **01 Apr 2022** at Engineer in Chief's Branch, Kashmir House, New Delhi to resolve the above mentioned queries.

(d) Last date of acceptance of all documents is **18 Apr 2022**. The vendors shortlisted for issue of RFP would be intimated.

7. The Government of India (GoI) invites responses to this request from **OEMs/ authorised Indian Vendors**. The end user of the equipment is the Indian Armed Forces.

8. This RFI is being issued with no financial commitment and the Ministry of Defence (MoD), GoI reserves the right to change or vary any part thereof at any stage. GoI also reserves the right to withdraw should it be necessary at any stage. The acquisition process would be carried out under the provisions of DAP 2020.

PART III

9. **Criteria for qualification in Buy (Indian-IDDM)/ Buy (Indian)/ Buy & Make (Indian)**. Vendors are required to understand criteria for qualification in Buy (Indian-IDDM)/ Buy (Indian)/ Buy & Make (Indian) categories as given at Chapter I of DAP 2020. Criteria for 'Indian Vendor' shall be as at Annexure IV to Appendix A of Chapter II, DAP 2020. Towards this, answers to specific questions as at **Appendix D** shall be filled in detail.

Appendix A
{Refers to Paragraphs 2, 6 & 9(c) of Combat Engineers Directorate letter No 80076/RHB (Amph)/ CE-5(B) dt ___ Mar 2022}

REQUEST FOR INFORMATION (RFI) : PROCEDURE FOR RESPONSE FOR RIGID HULL BOAT (RHB)

RFI for RHB

1. The Indian Army is planning to procure RHB. With the view to identify probable vendors who can undertake the said project, OEMs/ Authorised Vendors are requested to forward information on the product which they can offer. The parameters/ broad specifications of the equipment are mentioned in the questionnaire attached as per **Appendix B**. In addition the vendors are required to furnish details as per performa at **Appendices C & D**.

2. Apart from the information as per the Appendices the vendors may also forward technical details/product brochures/ literature etc pertaining to the item in question.

3. The required information/ details may please be forwarded at the following address by **18 Apr 2022**:-

(a) **Combat Engineers - 5(B)**
Combat Engineers Directorate
E-in-C's Branch, Room No 91, Kashmir House
Integrated HQ of MoD (Army)
Rajaji Marg, New Delhi-110011
Fax : 011-23019675
E mail : ce5-einc-army@nic.in

(b) **Directorate General of Capability Development (CD - 6)**
General Staff Branch
A Wing, Sena Bhawan
IHQ of MoD (Army)
DHQ PO, New Delhi-110011, E mail : dpack-542@gov.in

(c) **Directorate General of Capability Development (RFP Cell)**
General Staff Branch
Room No 437, Sena Bhawan
Integrated HQ of MoD (Army)
DHQ PO, New Delhi – 110011, Fax : 011-23012794

(d) **Additional Director General of Army Design Bureau (T&WS) (GSQR Cell), General Staff Branch 'C' Wing**
Room No 16, Sena Bhawan
Integrated HQ MoD (Army)
DHQ PO, New Delhi - 110011, Fax : 011-23014742

(e) **Additional Director General Technical (Army)**
Room No 30, D-II Wing, Sena Bhawan
Ministry of Defence, New Delhi - 110011
Fax : 011-23792414

Appendix B
{Refers to Paragraphs 6(a) of Combat Enginers Directorate letter No 80076/RHB (Amph)/ CE-5(B) dt ___ March 2022}

REQUEST FOR INFORMATION (RFI) : RIGID HULL BOAT (AMPHIBIOUS) {RHB(AMPH)}

Ser No	Specifications/ Parameters	Vendor Response
	SECTION A - GENERAL	
1	**Role**. The Rigid Hull Boat RHB(Amph) shall be required to perform following tasks at sea and also in shallow creek areas and at extreme temperatures:-	
	(a) Operation and Quick Reaction Teams.	
	(b) Domination of water bodies.	
	(c) Over the horizon induction/ de-induction of personnel.	
	(d) Deployment for Intervention Operations.	
	(e) Armed interception of high speed crafts.	
	(f) In support of Direct Action (including Amphibious operations).	
	(g) Operations in shallow and muddy waters.	
2	**General Description**. RHB(Amph) shall be an Amphibious boat to also be motorable on land with deployment of wheels and key operating parameters as under:-	
	(a) **Length Overall (wheels up)**. 9 to 11 Metres.	
	(b) **Width & Height in Aircraft Transport Mode**. Not more than 3.4 Metres and 3.00 Metres respectively.	
	(b) **Draught**. Not more than 0.5 Metres in fully loaded mode.	
	(c) **Displacement**. According to the design corresponding to speed, endurance, stability, etc.	
	(d) **Max Speed (with max payload)**. Not less than 40 Knots at 85% MCR at environmental conditions as at Paragraph 5 below.	
	(e) **Cruising Speed**. 25 to 30 Knots.	
	(f) **Endurance in Water (at cruising speed)**. Not less than 300 Km with maximum payload at environmental conditions as at Paragraph 5 below.	
	(g) **Top Speed on Land**. Not less than 15 Km/hr.	
	(f) **Fuel/ Oil capacity**. The fuel tank should cater for normal endurance of the RHB(Amph) with 10% reserve.	
	(h) **Reserve of Buoyancy**. As per requirements of Classification Society.	

Ser No	Specifications/ Parameters	Vendor Response
	(j) **Carrying capacity/ Payload**. Capable of carrying atleast 12 personnel with combat load including crew of two (approximate pay load 1560 Kg).	
	(k) **Transportability**. The RHB(Amph) shall be transportable by road (CHTT) and by air (IL-76 air craft).	
3	**Class**. RHB(Amph) shall be SOLAS compliant and designed & constructed as per IRS/ LRS/ DNV-GL/ BV/ ABS/ RINA/ NK Rules class notation/ SUL/ HSLC, RS-2 Patrol, SWASTIK 1Y for open sea operations Boat should have "V" shape hull with optimum dead rise angle to meet the desired speed and stability requirements. (*in case the RHB(Amph) is in adherence to all these Rules, but of a Classification Society other than IRS, details of the same to be brought out)*	
4	**Propulsion**. Of appropriate capacity (*suitable type of propulsion system to be suggested*).	
5	**Environment Conditions**.	
	(a) **Temperature**. (-)5^0C to 50^0C	
	(b) **Wind Speed**. Upto 40 Kms/ hour.	
	(c) **Salinity**. Upto 40000 ppm.	
	(d) **Sea / Water Worthiness**. Upto Sea State 4.	
	(e) Compliant to IP 66 ingress protection for electronics/ operating console.	
6	**Design**. The RHB(Amph) is to be designed to ensure safety of occupants, reduction of operator fatigue whilst achieving the desired standards for rugged military use. It is to be designed for high speed with good sea keeping features and soft riding hull characteristics even at maximum speed. The design of the crew and passenger seating should be such as to afford optimal visual field of view and provide adequate protection against exposure to water spray, winds etc. Designs meeting class requirements to be submitted as part of Technical Bids.	
7	**Stability**. The RHB(Amph) shall be "Self Righting Type" shall and have high stability & resistance to capsizing. It should be designed to remain intact and provide damage stability as per classification society norms.	
8	**Portability**. The boat should have Radar and other fittings mounted on a collapsible mast for better portability.	
	SECTION B - ARMAMENT / SPECIALIST EQUIPMENT	
9	**Weapon Mount**. Universal weapon mounts at forward deck, capable of at least 225^0 operations with ballistic shield (NIJ Level III) for operator protection.	

Ser No	Specifications/ Parameters	Vendor Response
10	**Storage Space**.	
	(a) Arrangement for stowage of 04 in number belted ammunition boxes and 24 grenades in removable/ detachable waterproof poncho/ bag in close proximity of the weapon mount.	
	(b) Arrangement for stowage of Pyrotechnics (10 flares and 12 rounds of Vary's Pistol), in removable/ detachable waterproof poncho/ bag in close proximity of the main console.	
	(c) Watertight, easily accessible compartment for stowing combat equipment of 10 combatants.	
	(d) The storage space should be ballistic protected (NIJ level III).	
	SECTION C - NAVIGATION	
11	**Main Console**. An ergonomically designed and shielded main/ helm console for discharge of all command and control functions with comfortable seats for the crew. Dismantlable/ collapsable rain proof canopy/ enclosure shall be provided for the crew. The pilot main console is to address the following:-	
	(a) Clear all round vision from the main console housing the multifunction display for the radar, mounted GPS, boat compass, and echo sounder and integrated display.	
	(b) Remote control facility for operations of engines and auxiliary machinery.	
	(c) Low power Radar (Radom type), ECDIS and Echo sounder.	
	(d) Engine performance monitoring panel, fuel state indicators, battery state indicator, battery charging indicator, switch for Navigation lights / dimmer for Navigation and panel lights etc. as per classification society rules.	
	(e) All instruments and switches shall be weather proof/ non-fading and shock resistant.	
	(f) Separate pressure indicator of the hydraulic system to be present at the main console.	
	(g) The canopy/ enclosure shall be ballistic protected (NIJ Level III) on all sides.	
12	**Navaids**. The RHB(Amph) is to be equipped with the following navigation suite, suitable to be fitted in boats, providing input to a multifunction Navigation display:-	
	(a) One Echo Sounder.	
	(b) One EM Log.	
	(c) One Gyro Compass.	
	(d) Mounted GPS compatible with IRNSS.	

Ser No	Specifications/ Parameters	Vendor Response
	(e) Low power radar (Random type).	
	(f) Auto Identification System (AIS).	
	(g) Electro Optical/ Infra Red sight display.	
	(f) The navigation system should be compatible with Defence Series Maps (DSM).	
	(j) Specifications of certain Navaids are at **Annexure I**.	
13	**Navigation Lights**. Two sets of navigation lights, one with IR filter are to be provided as per International Regulations for Prevention of Collisions at Sea, 1972, applicable for the RHB(Amph) of this size.	
	SECTION D - COMMUNICATIONS	
14	Integrated Mil Specs compliant communication suite to be fitted on the boat is as enumerated: -	
	(a) Handheld VHF Tx / Rx with VOX, waterproof jacket, charger and spare battery - four.	
	(b) HF Tx / Rx RT Set 100 W with direct and battery backup - one with charging facility.	
	(c) Suitable power supply/ space to be designated for Buyer Furnished Sitcom Suit - one.	
	(d) Onboard Communication system to enable continuous hands free contact between the various crew positions and passengers - at least five leads.	
	(e) EPIRB (Emergency Position indicating Radio Beacon) - one.	
	(f) Antenna length and material to be adjusted to operate in high sea/wind conditions. It should not be susceptible to breakage with normal usage. Parts and components used to be compatible with the systems used in civil field, to facilitate easy replacement.	
	SECTION E - SEAMANSHIP	
15	**Seamanship Fittings**.	
	(a) **Towing Arrangement**. The forward and aft section of the RHB(Amph) should have a suitable towing arrangement to tow similar displacement craft.	
	(b) **Lifting & Stowing Arrangement**. Non-fouling / snagging strong points are to be provided for hoisting the RHB(Amph). Certified lifting sling / strop / loading arm is also to be provided for hoisting the RHB(Amph) @ of two sets per individual design parameters. Further, the RHB(Amph) should have provision to enable it to be hoisted / lowered using both shore/ ship borne overhead crane. The lifting sling / strop should be of minimum length whilst ensuring safe hoisting of RHB(Amph). Lifting hooks provided on RHB(Amph) should be able to bear strain up to 45° angle.	

Ser No	Specifications/ Parameters	Vendor Response
	(c) Boat hook / Pole, fairleads aft, forward bow cleats / mooring bollard with fairleads and in addition sufficient eye bolts on the floor to secure equipment / loads.	
	(d) Anchor and anchor cable along with stowage arrangement to be provided.	
	(e) Buyoyant paddles (oars) with stowage pockets are to be fitted on collar.	
16	**Weatherproof Covers**. Two sets of lightweight weatherproof covers are to be provided for each weather deck fittings and console. In addition tailor made weatherproof cover for the entire boat is also to be provided for preservation.	
17	**Life Saving Equipment**.	
	(a) Hazardous Duty Life Jackets (HDLJ) for 12 personnel per boat with 50% reserve are to be supplied.	
	(b) Seats and gun mount to be removable and to be provided with safety harness and hand hold / rails throughout the boat. All seats should have mechanisms to dampen the shock experienced as the boat bounces at high speed during rough weather.	
	(c) Jason's Cradle with each boat.	
18	**Deck / Deck Fittings**. Workspace / decks should be non-skid type. All steel deck fittings shall be of Stainless Steel grade AISI 316. All these fittings should be fastened through FRP on to a S.S. backing plate with S.S fasteners. The backing plate shall be laid up and covered up with adequate number of FRP layers. All the deck fittings need to be as per IS / International Standards and to be certified by class.	
19	**List of Seamanship Items**. Fenders and other items as given below be provided with each boat:-	
	(a) Polyester cable, 16mm dia, 40m length - two.	
	(b) Polypropylene ropes, 24mm dia, 40m Length, fitted with suitable GI thimble - two.	
	(c) Aluminium boat hooks, 50mm dia, with 3m long wooden staves - two.	
	(d) Mooring lines, 18mm dia, 40m PP rope - two.	
	(e) SOLAS compliant life buoys with self-igniting lamp - four.	
	(f) Portable Pneumatic Rubber Fenders - eight.	
	(g) Rescue quoit and line - two.	
	(h) Engine Halyard, 06mm dia, PP rope, 15 meters in length - one.	
	(j) Spare Halyard, 06mm dia, PP rope, 50 meters in length - one.	
	(k) Life line, 08mm dia, PP rope, 50 meter in length - one.	

Ser No	Specifications/ Parameters	Vendor Response
	(l) Life line seizing rope (Nylon), 20 meter in length - one.	
	(m) Stern fast 25mm dia PP rope, 30m, with one end duly spliced with one Galvanised MS Thimble and another end to be pointed - one.	
	(n) Painter rope, 25mm dia, PP rope of 30m with one end duly spliced with one Galvanised MS Thimble and another end to be pointed - one.	
	(o) Tow line 25mm dia PP rope of length 40 meters - one.	
	SECTION F - CONSTRUCTION	
20	**Hull**. The hull shall be of minimum 5 mm thick Marine Grade Aluminium and constructed in accordance with Classification Society Rules.	
21	**Collar**. The foam type D shape filled collar to be manufactured in environment controlled rubber mould shop and in accordance with Classification Society rules and norms. End cones are to be suitably stiffened to take impact during astern motion. The tube should be fitted with heavy duty abrasion cladding on the outboard side all around. The Collar should have an additional tendering layer at locations likely to encounter repeated bashing/ rubbing and stepping by personnel and crew. Retro reflecting tapes should be pasted/ stitched on the boat collar.	
	(a) **Functional**. The foam filled D shaped collar tube on the RHB(Amph) is to be strong enough to sustain the effects of ramming whilst coming alongside or boarding a vessel underway. The upper layer should be strong enough to bear the rubbing impact against barnacles / rough surfaces. It should not be easily pierced. The collar should be strengthened using non-marking rubbing strakes of an appropriate material.	
	(b) **Construction**. The tubes should be of ORCA@866 fabric with closed cell expandable polyethylene foam inside the collar. The bonding of these materials should be by employing the latest calendaring techniques using advanced / special chemical adhesives. The collar should be easily repairable with ready use patches in any contingency.	
	(c) In addition, availability of the following is to be ensured:-	
	(i) Transom mounted crash protection frame.	
	(ii) External lifelines.	
	(iii) Triple fendering and full nose cladding as also double skinning wear patches for areas prone to rapid wear and tear are to be ensured.	

Ser No	Specifications/ Parameters	Vendor Response
	(iv) The material of the collar should, as far as possible, be self-repairing. An emergency repair kit for the collar is to be provided in all RHB(Amph).	
	(v) **Buoyancy**. RHB(Amph) shall be designed with sufficient buoyancy. The GM arrangement of buoyancy proposed should be as per Class Rules.	
22	All SS materials on the deck or any other place should be of marine grade SS-316.	
	SECTION G - ENGINE / SYSTEMS	
23	**Tank Capacities**. To meet endurance specified in ***Section A*** in consonance with the type of Engines. The tanks are to be designed to ensure complete stability at various rates of consumption. Two below-floor fuel tanks of capacity to cater for normal endurance of the RHB(Amph) with 10% reserve without lowering the operating parameters outlined at Paragraph 2 above. A fuel gauge for each tank shall be fitted having display in the instrument panel. Each tank shall supply only to its own side of engine (or OBM) which shall provide separation and redundancy in the fuel supply in case of contamination, damage, etc. However, a synchronization system shall be provided to allow both engines/ OBMs to run with either tank in an emergency. The fuel tanks shall have ballistic protection (NIJ Level III). Two Numbers of UV resistant flexible fuel tanks of minimum capacity 50 ltrs each to be provided in addition for emergency use along with accessories.	
24	**Propulsion Package**. Vendors shall propose the machinery and propulsion package which should be able to provide sustained operations for endurance of 08 hours at cruising speed with maximum pay load. The propulsion units are to be seated on suitable vibration mounts to minimise the vibrations.	
25	**Fire Fighting**. Adequate fire protection equipment and firefighting arrangements meeting Classification Society requirements are to be provided.	
26	**Bilge Pump**. The RHB(Amph) is to have one suitable electric and one hand operated bilge pump capable of completely clearing the hull cavity and bilges. Suitable flood sensors to be provided with automatic operation of bilge pump.	
27	**Miscellaneous**.	
	(a) An emergency fuel supply shutoff valve is to be provided outside the casing, to prevent spreading of engine fire.	

Ser No	Specifications/ Parameters	Vendor Response
	(b) Separate hydraulic pump for Port jet Bucket / Steering system along with provisioning of Cross Connection to ensure smooth operation despite breakdown of one of the systems (if applicable).	
	SECTION H - ELECTRICAL	
28	**Power Supply**. The Power Generation and Distribution (PGD) system comprising of alternator, suitable conversion equipment (viz transformer / rectifier, inverter etc), distribution panels and associated gear etc should conform to the classification society's norms. The power supply should cater for uninterrupted power supply to various consumers viz radar, control system, navigation and communication aids, and lighting / electrical appliances fitted on the boat. Standard power supplies ie 230V, 50 Hz, 1 Phase and 24 V DC are to be used.	
29	**Batteries**. Valve Regulated Lead Acid (VRLA) batteries of adequate capacities to cater for emergency power backup for the equipment onboard and engine starting requirements (as appropriate) be provided. Suitable battery charging arrangement to facilitate charging of above batteries using power supply from shore / mother ship be provided.	
30	**Equipment / Lighting**. All electrical equipment, cables and fittings shall be of proven design and shall conform to Classification Society's regulations. Following COTS general lighting and fittings are to be provided:-	
	(a) Adequate LED based lighting/ luminaries to illuminate the main console, deck fixtures, instrument gauge and alarm panels. Preferably, single core cable is to be used for lighting circuits.	
	(b) Emergency light fittings of 24 V are to be supplied at appropriate locations.	
	(c) All electrical and machinery equipment are to be installed with due regard to EMI/ EMC issues as per classification society regulations.	
	(d) Document consisting of basic electrical diagram be provided for generator and other conversion machineries.	
31	Motorised search and spot lights is to be provided on the double arch frame one on either side.	
32	Switch sockets are to be of Double Pole type.	
33	Window wipers and Antifogging arrangement be provided.	
	SECTION J - AMPHIBIOUS SYSTEM	
34	**Amphibious System Type**. The RHB(Amph) should have marinised retractable and hydraulically operated legs and wheels.	

Ser No	Specifications/ Parameters	Vendor Response
35	**Amphibious Power Sources**. The Amphibious power source should be separate other than the main engines, but drawing fuel from the common tanl. It should be able to provide a top speed of atleast 15 Km/hr on land.	
36	**Features**.	
	(a) All wheel drive.	
	(b) Power Steering with a manual backup in case of failure of the hydraulic pump. It should also have the provision to check centering of the boat wheel alignment during trasition from marine to land operations.	
	(c) Tyres should be of all terrain type with alloy rim.	
	SECTION K - MEDICAL	
37	**Medical Wall**. A detachable medical rack along with equipment fitting towards the rear of the boat is to be supplied. The modular rack should have the following equipment fitted:-	
	(a) Portable derfibrillator.	
	(b) Basic first aid equipment.	
38	**Stretchers**. The boat is to be provided with one collapsible stretcher, with suitable securing arrangement.	
	SECTION L - MISCELLANEOUS	
39	**Potable Water**. Two flexible UV resistant tanks of capacity not less than 30 ltrs each for water storage shall be provided as accessories.	
40	**Seating**. The seating arrangement for 12 personnel including mission and craft crew should be of adjustable and shock mitigating type and should be removable depending on mission profile. Hand and foot holds for all all crew and personnel to be provided.	
41	**Announcement System**. A suitable announcement system to be fitted in the boat.	
42	All fuel, oils, lubricants and coolants to be used in the RHB(Amph) to be COTS.	
43	**Approval of Drawings & Documents**. Approval of documents to be done by the Classification Society as per classification society rules for all equipment.	
44	**Panelling**. Panelling of seating spaces and main console etc should be fire retardant.	
	Indigenous Content/ Production	
45	Will your product meet Buy (Indian)/ Buy (Indian-IDDM) specifications as per DAP 2020. Specify with details.	
46	Can the RHB(Amph) be produced indigenously? If yes, what will be the Indigenous Content provided & verification process?	

Ser No	Specifications/ Parameters	Vendor Response
47	What is the overall percentage of indigenisation for the RHB(Amph) in terms of cost?	
48	What are the critical technologies which your industry has taken from global partners or Joint Venture (JV), if any? Or what are the essential critical technologies which are required to be obtained?	
49	How much time will the start up/ JV take to start production?	
50	Does your Indian Industry have the capacity to design develop, manufacture, test and integrate the system including the critical technology?	
51	Do you have industrial licenses for the production of the RHB(Amph)? If not, have you applied for the same and when (date) and by when it is likely to be granted?	
52	How much time is required by the Industry to deliver the RHB(Amph)/ platform with the stipulated indigenous content, post trials/ contract for operational use?	
53	Please furnish details of IPR documentation/ patents/ design resignation/ copyright etc registered with the authorised agency in respect of the RHB(Amph)?	
54	Is complete set of design and production drawing and source code for all software applications/ programmes available with your company? Can they be produced for verification?	
55	Is there any Transfer of Technology (ToT) involved? If so, specify complete details.	
56	Is the OEM willing to provide ToT? If yes, then what are the critical technologies that can be provided (depth and range also to be qualified)?	
57	How and in what 'Time Frame' will you ensure the ToT?	
58	Are there any qualifying terms and conditions for toT? Specify details.	
59	Do you have Production Agencies in India? If so, specify details.	
60	If the equipment is of foreign origin then what is the capability of Indian Vendor to indigenously design and develop the required equipment.	
	Trials/ Prototype/COTS	
61	Is the prototype readily available or has to be designed/ manufactured?	
62	In what time frame can the prototype of RHB(Amph) be fielded for trials after contract? This data should factor time for transportation etc.	

Ser No	Specifications/ Parameters	Vendor Response
63	Is the proposed equipment readily available as COTS? If so what quantities have been sold to various agencies (Govt/ otherwise) in the last five years? Details to be furnished.	
64	What are the in house testing facilities available with your firm?	
	EMI/EMC and other Standards	
65	What Military Standards are being confirmed to by the RHB(Amph) produced by the OEM/ Vendor?	
66	What Joint Service Specifications/ Joint Service Guidelines are being confirmed by the RHB(Amph) produced by you?	
67	Which accredited laboratory (Indian/ International) has certified your RHB(Amph)?	
	Product Support	
68	What is the warranty period offered for the RHB(Amph) (in years and hours of operation)?	
69	Have you supplied the RHB(Amph) to any other firm in India/ abroad? If yes, furnish details of the supply, including quantity.	
70	Does your firm have major repair and overhaul facility for major assemblies and component level repairs?	
71	What is the likely 'Service Life' of the RHB(Amph) produced by your company?	
72	Is there a requirement of periodic calibration of any Special Machine Tools/ Special Test Equipment (SMTs/ STEs)? If yes, will you provide capability to undertake calibration, as part of Engineering Support Package?	
73	What kind of Engineering Support Package will you be offering? Please also mention cost implications, if any.	
74	Will the Engineering Support Package cater for repairs of Special Test Equipment (STEs) also, to include spares, technical literature, training etc? If not, then what is your proposal for sustenance of Special Test Equipment's (STEs)?	
75	What life time support can be provided by the vendor? Is the product support assured for the same period from all sub vendors?	
	Maintenance/ Repair/ Upgradation Philosophy	
76	What would be the Maintenance Philosophy for repair and maintenance of the RHB(Amph)? Can it be aligned with the system of unit and Field level repairs prevalent in the Defence Services?	
77	Are you ready to provide AMC for for the equipment?	

Ser No	Specifications/ Parameters	Vendor Response
78	Please provide inputs, including costs (as a percentage of the cost of the main equipment) for Comprehensive AMC and AMC without spares separately?	
79	Are you willing to provide Maintenance Transfer of Technology (MToT) for sustenance of equipment as per requirements given at Appendix H to Schedule I to Chapter II of DAP 2020?	
80	What is the type of product support and period for which you commit the product support for sustenance of equipment in terms of supply of spares/ AMC/ calibration etc?	
81	How many sub vendors are involved in the manufacturing of product? Is product support from all sub vendors also assured for the same period, as committed by you?	
82	What would be the infrastructure & skill sets needed for maintenance?	
83	Does your RHB(Amph) have Built in Test Equipment (BITE) to support diagnostics and repair through modular replacement?	
84	Is there any software applicable to your RHB(Amph)? If yes, can it be restored in field in case of any fault? Is it upgradable? Whether open paper license is available or not?	
85	Does your equipment or any of its sub system have counter to display cumulative usage to facilitate usage based preventive/ period maintenance?	
86	What would be the training requirement for maintenance of the RHB(Amph) at field level?	
87	List out the tools and accessories provided with the RHB(Amph).	
88	Is there any automatic diagnostic equipment available to check the health of engine, Hydraulics and sensors?	
89	What would be the upgradation philosophy with respect to the RHB(Amph)?	
90	Elaborate upon the frequency and nature of upgrades recommended by you.	
91	Will software upgrades/ patches be provided whenever required?	
92	What is Mean Time to Repair (MTTR) for repairs through replacement? What is the Mean Time Between Failure (MTBF) for the equipment and its main assemblies?	
93	Can the power pack (generators and batteries) be of Indian origin?	
	Training	
94	Will you be able to offer Sectionised/ Cut Models, 3D models CDs for training? Please elaborate the scope/ components covered.	

Ser No	Specifications/ Parameters	Vendor Response
95	Have you developed a class room trainer and a Computer Based Training (CBT) package for training?	
96	Will you be able to provide IETM Version 4?	
97	What are the facilities available at OEM/ Vendor premises to conduct training?	
98	How will you assist in carrying out training for user, maintenance personnel and QA personnel?	
99	Whether simulators for the equipment are available?If yes, what is the approximate cost of each and whether training can be organised on them?	
100	What is the recommended training period of maintenance and QA personnel and user/ crew?	
101	Can a user bilingual hand book, repair and maintenance manual and spare parts catalogue be provided with each RHB(Amph)?	
	Commercial Terms/ Cost	
102	Please provide list of all the elements which need to be structured in the costing of the equipment system (including comprehensive maintenance/ product support package)	
103	What will be the estimated price of the complete RHB(Amph)? Also mention the Minimum Order Quantity for the price quoted.	
104	What is the approximate cost of the RHB(Amph) as defined above in Indian Rupees (including taxes and duties)?	
105	Please provide inputs on the cost of Engineering Support Package {which shall include Manufactured Recommended List of Spares (MRLS) for two years post warranty, Special Machine Tools (SMT)/ Special Test Equipment (STE), Training Aggregates, Technical Litreture and Training} as a percentage of the cost of the main equipment along with details of taxes & duties applicable.	
106	Please provide an approximate cost (to include taxes and duties) of a similar commercial off the shelf version of the equipment, if it exists?	
107	Please provide a list of the features, included in this RFI which are not included in the commercial version along with the approximate cost implication for each individual feature?	
108	What INCOTERMS 2020 are suitable/ preferred by your company and for what reasons?	
109	What is your preferred mode of shipment of goods - road, sea, air or a combination?	
	Time Schedule	
110	What is your annual production capacity for the RHB(Amph)? Is it likely to increase? What is the recommended ‘Delivery Schedule?	

Ser No	Specifications/ Parameters	Vendor Response
111	What is the earliest timeframe by when the RHB(Amph) can be delivered after placing of order?	
	Miscellaneous	
112	Are you an OEM of the equipment or an authorised vendor? If OEM, then forward your company profile?	
113	Will your firm be willing to supply the RHB(Amph) to Indian Army under provisions of DAP-2020?	
114	What are the enhanced parameters/ specifications of RHB(Amph) which can be offered?	
115	Are you willing to accept the Option Clause? Give the duration for which the clause would be valid?	
116	Have you supplied similar equipment as defined above to Indian Navy, Central Armed Police Force, Para-Military Forces or other Ministry of Defence Agencies (if yes please provide details of year of supply, quantities and specifications of product. Also specify if the supplied equipment is the COTS variant or bring out details of modifications)?	
117	Any other relevant information in terms of specifications/ terms of ref, the OEM/ Vendor would like to share.	

Appendix C

{Refers to Serial 6(c) of Appendix B of Combat Engneers Directorate letter No 80076/RHB(Amph)/CE-5(B) dt ___ March 2022}

PERFORMA FOR REPLY TO RFI TO BE FOLLOWED

1. **Name of the Vendor/Company/Firm**.

   (Company profile including Share Holding pattern, in brief, to be attached)

2. **Type (Tick the Relevant Category)**.

   (a) Original Equipment Manufacturer (OEM) Yes / No

   (b) Authorised Vendor of foreign Firm Yes/No
   (attach details, if yes)

   (c) Other (give specific details)

3. **Contact Details**.

   Postal Address

   City:_____State :_____

   Pin Code:_____ Tele:_____

   Fax:_____URL/Website:_____Email._____

4. **Local Branch/ Liaison Office in Delhi (if any)**.

   Name and Address :
   _____
   _____

   Pin Code :_____Tele: _____Fax : _____

5. **Financial Details**.

   (a) Category of Industry (Large/medium/small Scale) :
   _____

   (b) Annual turnover: _____ (in INR).

(c) Number of employees in firm : _____

(d) Details of manufacturing infrastructure: _____

(e) Earlier contracts with Indian Ministry of Defence/Government agencies:

Contract Number	Equipment	Quantity	Cost

6. **Certification by Quality Assurance Organisation**.

Name of Agency	Certification	Applicable from (Date & Year)	Valid till (Date & Year)

7. **Details of Registration**.

Agency	Registration No	Validity (Date)	Equipment
GeM			
DGQA/DGAQA/DGNAI			
OFB			
DRDO			
Any other Government Agency			

8. **Membership of FICCI/ASSOCHAM/CII or other Industrial Associations.**

Name of Organisation	Membership Number

9. **Equipment/Product Profile (to be submitted for each product separately).**

(a) Name of Product :_____
(IDDM Capability be indicated against the product)
(should be given category wise for e.g. all products under night vision devices to be mentioned together)

(b) Description (attach technical literature) :_____

(c) Whether OEM or Integrator :_____

(d) Name and address of Foreign collaborator (if any): _____

(e) Industrial License Number: _____

(f) Indigenous component of the product (in percentage): _____

(g) Status (in service /design & development stage) : _____

(h) Production capacity per annum: _____

(j) Countries/agencies where equipment supplied earlier (give details of quantity supplied) Also specify if the supplied equipment is the COTS variant or bring out details of modifications. _____

(k) Estimated price of the equipment _____

10. Alternatives for meeting the objectives of the equipment set forth in the RFI.

11. Any other relevant information:_____

12. **Declaration**.

(a) It is certified that the above information is true and any changes will be intimated within five (05) working days of occurrence.

(b) This information is being issued with no financial commitment and the Ministry of Defence, Government of India reserves the right to change or vary any part thereof, at any stage. The Government of India also reserves the right to withdraw it, should it be necessary at any stage. The acquisition process would be carried out under the provisions of Defence Acquisition Procedure 2020 (as amended).

(Authorised Signatory)

Appendix D

{Refers to Paragraphs 6(c) & 9 of Combat Engineers Directorate letter No 80076/RHB(Amph)/CE-5(B) dt ____ March 2022}

QUESTIONNAIRE ON GUIDELINES FOR VENDOR SELECTION/ PRE-QUALIFICATION FOR INDIAN VENDORS

1. Is the Applicant Entity an Indian Company as defined under the Companies Act 2013?

2. Has the Applicant Entity of any of its allied entities ever been banned or suspended by MoD/SHQ of any Government Department of Organisation? Details of vigilance action viz ongoing investigations by any Department/agency of Central Government may be provided.

3. Is the Applicant Entity a Manufacturing Entity or System Integrator or a Trading Company?

4. Does your Company have any previous experience/ expertise in this field? Specify the field of expertise/ experience of your company and the duration of experience in years.

5. Specify the turnover and net worth of your Company in the last three (03) years.

6. Is your Company under insolvency resolution as per Indian Bankruptcy Code?

7. What is the Credit Rating of your Company equivalent to CRISIL rating?

8. Does your Company qualify under Start Up or MSME Category?

9. Are there any Export Regulations in your Country (for Foreign Vendors)?