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Reply should be addressed to the  
Director General Indian Coast Guard

**TATRAKSHAK MUKHYALAYA**  
Coast Guard Headquarters  
National Stadium Complex  
New Delhi-110 001

Quoting: AA/0850/TEHH

10 September, 2018

*'As per list of addressees'*

**REQUEST FOR INFORMATION**  
**TWIN ENGINE HEAVY HELICOPTERS**

1. The Indian Coast Guard intends to procure **Fourteen** new build Twin Engine Heavy Helicopters for Maritime Surveillance, Interdiction and SAR with capability of Stage Through operations from its Advanced Offshore Patrol Vessels (AOPVs).
2. You are requested to fill up the attached questionnaire and forward to Coast Guard Headquarters by speed post and e-mail latest by **01 Oct 18**.
3. Where information cannot be furnished, it is requested that the column be left blank or a recommended figure be given. The information should be given in exactly the same order as requested with no extrapolation required by the reader. Wherever necessary, extra information can be attached as appendices. The use of graphs is to be avoided.

  
(Ajay Sood)  
Commandant  
Director (Aircraft Acquisition)  
for Director General

**Enclosure:-** As above

**INFORMATION PROFORMA**  
**(INDIAN VENDORS)**

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

\_\_\_\_\_  
\_\_\_\_\_  
(Company profile, in brief, to be attached)

2. **Type (Tick the relevant category).**

Original Equipment Manufacturer (OEM) Yes/No  
Authorised Vendor of foreign Firm Yes/No (attach details, if yes)  
Others (give specific details)

\_\_\_\_\_  
\_\_\_\_\_

3. **Contact Details.**

**Postal Address:**

\_\_\_\_\_  
\_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_

Pin Code: \_\_\_\_\_ Tele: \_\_\_\_\_

Fax: \_\_\_\_\_ URL/Web Site: \_\_\_\_\_

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

Name & Address: \_\_\_\_\_

Pin code: \_\_\_\_\_ Tel: \_\_\_\_\_ 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
CGS&D			
CGQA/DGAQA/DGNAI			
CFB			
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:

(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):

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

***(Authorised Signatory)***

**INFORMATION PROFORMA**  
**(FOREIGN VENDORS)**

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

\_\_\_\_\_

(Company profile, in brief, to be attached)

2. **Type (Tick the relevant category).**

Original Equipment Manufacturer (OEM) Yes/No

Component sponsored Export Agency Yes/No (Details of registration to be provided)

Authorised Vendor of OEM Yes/No (attach details)

Others (give specific details) \_\_\_\_\_

3. **Contact Details.**

**Postal Address:**

\_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_

Country \_\_\_\_\_ Pin/ Zip Code: \_\_\_\_\_

Tele: \_\_\_\_\_ Fax: \_\_\_\_\_

URL/Web Site: \_\_\_\_\_

4. **Local Branch/ Liaison Office/Authorised Representatives, in India (if any).**

Name & Address: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_ b

Pin code: \_\_\_\_\_ Tel: \_\_\_\_\_ Fax: \_\_\_\_\_

5. **Financial Details.**

(a) Annual turnover: \_\_\_\_\_ USD

(b) Number of employees in firm: \_\_\_\_\_

(c) Details of manufacturing infrastructure: \_\_\_\_\_

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

Agency	Contact Number	Equipment	Quantity	Cost

6. **Certification by Quality Assurance Organisation (If Applicable).**

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

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

(a) Name of 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) Status (in service/Design development stage):

(e) Production capacity per annum:

(f) Countries where equipment is in service:

(g) Whether export clearance is required from respective Government:

(i) Any collaboration/ joint venture/co production/ authorized dealer with Indian Industry (give details):

Name & Address: \_\_\_\_\_

Tel: \_\_\_\_\_ Fax: \_\_\_\_\_

(j) Estimated price of the equipment

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

9. **Any other relevant information:**

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

***(Authorised Signatory)***

## **REQUEST FOR INFORMATION: TWIN ENGINE HEAVY HELICOPTER**

Instructions for furnishing information: -

- (a) The vendor response should be filled in English only.
- (b) The following units should be used- Weight (kilogram), Altitude (feet), Temperature (°C), Distance (nautical miles), Pressure (hPa), Length (meters)
- (c) Make and model of all equipment to be fitted for the project in the helicopter should be furnished in response column along with the information.
- (d) There are two sections viz. general requirements and mission profile performance parameters. Please provide specific response/ compliance details

### **SECTION I**

#### **GENERAL REQUIREMENTS**

1. **Definitions**
  - (a) **Green Helicopter** – Helicopter without any mission equipment, sensors and operator stations.

(b) **Basic Helicopter** – Green helicopter equipped with mission sensors and equipment [Weather cum Surveillance Radar, Electro-Optical/Infra-Red Device, Search Light, Rescue Hoist, Automatic Identification System (AIS), air conditioning equipment, speech secrecy equipment, IFF transponder, emergency floatation gear and crew life rafts].

2. **Role.** The envisaged role for the helicopter are as follows: -

(a) **Primary.** The primary roles of the helicopter would be as follows:

- (i) Maritime Surveillance and Interdiction
- (ii) Search and Rescue.

(b) **Secondary.**

- (i) Slithering/Rappelling Operations
- (ii) Communication Duties
- (iii) External Cargo Carrying
- (iv) Casualty Evacuation



3. **Commercial Information**

<b><u>SI No</u></b>	<b><u>Information Required</u></b>	<b><u>Response</u></b>
(a)	Time required for submission of RFP	
(b)	Feasible Delivery Schedule after signing of contract	

4. **Helicopter Information & Characteristics**

<b><u>SI No</u></b>	<b><u>Information Required/Remarks</u></b>	<b><u>Response/Compliance</u></b>
(a)	Manufacturer, Mark and Model of helicopter	
(b)	Is the helicopter (Green or Basic) or variant thereof inoperation with Armed Forces of any country?If yes, give details	
(c)	Does the helicopter comply with FAR Part 29 (Transport Category Helicopters) of the FAA, USA or JAR 29 of the EASA or military specifications of the country of manufacture?	
(d)	Is the helicopter Certified to operate by day and night for the entire capability requirement?	
(e)	Is the helicopter Certified to operate in Visual and Instrument Flight Conditions?	
(f)	Does the helicopter have corrosion resistant airframe design ideally suited for operation in humid and highly corrosive sea environmental conditions?	

<b><u>Sl No</u></b>	<b><u>Information Required/Remarks</u></b>	<b><u>Response/Compliance</u></b>
(g)	Is the helicopter equipped with communication, navigation and mission systems for operations in domestic, international, civilian and military airspace?	
(h)	Is the helicopter equipped with Full Glass cockpit?	
(i)	Is the helicopter fitted with Health Usage and Monitoring Systems?	
(m)	Are suitable means provided to ensure safe exit of all aircrew in case of ditching?	

5. **Condition for Use.** The various conditions for the use of this helicopter are as follows: -

(a) **Performance Requirements.** Performance requirements must be met in Indian Reference Atmosphere (IRA) conditions. The relevant parameters of IRA are as below: -

- (i) Sea Level Mean Temperature : ISA+15°C
- (ii) Reference temperature for take-off, hover & Landing : ISA+20°C at MSL
- (iii) Upper Air Temperature for cruise and climb : ISA + 15°C
- (iv) Lapse Rate from sea level to 16 km : -6.5°C/km
- (v) Mean Sea Level pressure : 1005 hPa
- (vi) Relative Humidity : 95%

(b) **Tropicalisation.** Is the helicopter and its systems tropicalised to operate in following conditions:-

<b><u>Sl</u></b> <b><u>No</u></b>	<b><u>Information Required</u></b>	<b><u>Response/Compliance</u></b>
(a)	Temperature range of -5°C to +45°C	
(b)	Relative Humidity of 95%	

(c) **Storage Conditions.** Is the helicopter and its systems tropicalised for storage in following conditions:-

<b><u>Sl</u></b> <b><u>No</u></b>	<b><u>Information Required</u></b>	<b><u>Response/Compliance</u></b>
(a)	Temperature conditions : -15°C to + 50°C.	
(b)	Relative Humidity : Maximum 90% RH non-condensing	

6. **Ship Borne Operations.**

<b><u>Sl No</u></b>	<b><u>Information Required</u></b>	<b><u>Response/Compliance</u></b>
(a)	Can the helicopter operate from ships with helideck measuring 22 m(L) x 10 m(B).	
(b)	Are adequate tie down / lashing points provided on the helicopter for lashed stability when tethered to the deck.	

7. **Power Plant.** The following helicopter power plant details may be furnished:-

<b><u>Sl No</u></b>	<b><u>Information Required/Remarks</u></b>	<b><u>Response/Compliance</u></b>
(a)	Is the helicopter powered by at least two engines?	
(b)	Does the engine incorporate a 'Digital Electronic Control system'?	
(c)	Does the helicopter have self-contained starter system without usage of external battery for purging, priming and starting the engines after a gap of up to 03 days?	
(d)	Is there capability to fit engines with sand filters/ particle separators for operations from unprepared sites.	

8. **Fuel System**

<b><u>SI</u></b> <b><u>No</u></b>	<b><u>Information Required/Remarks</u></b>	<b><u>Response/Compliance</u></b>
(a)	Can all the fuel system tanks be replenished from pressure and gravity refueling point?	
(b)	Does the helicopter operate on Jet A, Jet A1, JP4, JP5, JP8, ATFK-50 and equivalent grades of fuel? Is the helicopter capable to operate on AVCAT fuel available onboard ICG ships?	
(c)	Is the helicopter capable of jettisoning fuel from Main tanks to reduce AUV for operational considerations?	
(d)	Is the helicopter capable of pressure/suction de-fueling on ground?	
(e)	Is there a provision for fitment of additional internal/ external fuel tanks?	
(f)	Is the helicopter equipped with pressure refueling system capable of Helicopter In Flight Refueling (HIFR)?	

9. **Flight Controls**

<b><u>SI</u></b> <b><u>No</u></b>	<b><u>Information Required/Remarks</u></b>	<b><u>Response/Compliance</u></b>
(a)	Is the helicopter provided with fully duplicated flying controls?	
(b)	Does the helicopter have four axis Automatic Flight Control System (AFCS) with stability and	

<b><u>Sl No</u></b>	<b><u>Information Required/Remarks</u></b>	<b><u>Response/Compliance</u></b>
	control augmentation?	
(c)	Is the helicopter capable of transiting to and from a hover height, which is pre-selectable through AFCS?	
(d)	Is the helicopter capable of Barometric and Radio Altimeter Height Holds (BARALT and RADALT)	

10. **Transmission System**

<b><u>Sl No</u></b>	<b><u>Information Required/Remarks</u></b>	<b><u>Response/Compliance</u></b>
(a)	Is the MGB capable of a minimum flight time of at least 20 minutes after the annunciation of a warning caption/light.	

11. **Undercarriage.** Helicopter shall have wheeled undercarriage landing gear for ship borne operations

<b><u>Sl No</u></b>	<b><u>Information Required/Remarks</u></b>	<b><u>Response/Compliance</u></b>
(a)	Is the helicopter fitted with a wheeled undercarriage landing gear?	
(b)	If the undercarriage is retractable, is there a provision for lowering by emergency means if the primary means fail.	
(c)	Have Parking brakes been provided?	

12. **Rotor Blades**

<b><u>SI No</u></b>	<b><u>Information Required/Remarks</u></b>	<b><u>Response/Compliance</u></b>
(a)	Is there a provision of automatic and/ or manual folding and spreading of MRB?	
(b)	Have the Rotor brakes been provided?	

13. **Cockpit and Cabin.**

<b><u>SI No</u></b>	<b><u>Information Required/Remarks</u></b>	<b><u>Response/Compliance</u></b>
(a)	Is the Flight deck and Cabin of the helicopter air-conditioned in air and on ground?	
(b)	Is NVG compatible cockpit instrumentation provided in the helicopter? Are the NVG Compatible Displays and controls readable in the full range of anticipated light conditions during day, night, VMC and IMC?	
(c)	Is at least one portable fire extinguisher provided in the cabin and flight-deck?	

14. **Crew Station.** Does the helicopter have provision for the following crew stations?

<b><u>S.No</u></b>	<b><u>Crew</u></b>	<b><u>No.</u></b>	<b><u>Response/Compliance</u></b>
(a)	Pilot	02	
(b)	Crew/winch operator	01	
(c)	Crew	01	

15. **Electrical Power Supply.**

<b><u>SI No</u></b>	<b><u>Information Required</u></b>	<b><u>Response/Compliance</u></b>
(a)	If the helicopter uses electrical power for starting, is it capable to accept 28 Volt DC/ 115 Volt 400 Hz three phase AC from external power source using standard NATO adapters?	

16. **Ceiling.**

<b><u>SI No</u></b>	<b><u>Information Required</u></b>	<b><u>Response/Compliance</u></b>
(a)	The service ceiling of the helicopter should not be less than 10000 feet?	



17. **Environment Protection.**

<b><u>Sl No</u></b>	<b><u>Information Required/Remarks</u></b>	<b><u>Response/Compliance</u></b>
(a)	Is the helicopter and the complete installed or portable role equipment, whether sheltered or unsheltered, suitably protected against Solar Radiation, Fungus, Rain, Salt Spray, Sand and Dust, Wind Velocity, Shock, Degree of Exposure, EMI/EMC/RFI and Safety Distance for active emitters?	
(b)	Does the helicopter design ensure that the EMI does not cause safety of flight issues, faults that are not recoverable while in flight or system degradation that effect mission performance?	

18. **Navigational Lights**

<b><u>Sl No</u></b>	<b><u>Information Required/Remarks</u></b>	<b><u>Response/Compliance</u></b>
(a)	Are the Navigational lights provided in the helicopter NVG compatible?	
(b)	Are the quantities and specifications of the Navigation lights as per ICAO regulations?	

19. Miscellaneous Issues.

<u>Sl No</u>	<u>Information Required</u>	<u>Response/Compliance</u>
(a)	Is the Tele brief system capable of providing voice information to crew from outside the helicopter on deck been provided?	
(b)	Is the wheel brake system provided capable of being used during cold and hot move of the helicopter?	
(c)	Is there a Sonar Locating Beacon/Underwater Locating Beacon fitted on the helicopter?	
(d)	Is the helicopter equipped with an Emergency Floatation Gear?	
(e)	Is the helicopter equipped with a Digital Video Recording System with atleast 05 hours recording time for recording video from radar and EO/IR device?	

20. All Up Weight (AUW) Considerations

<u>Sl No</u>	<u>Information Required</u>	<u>Response/Compliance</u>
(a)	<b>Max AUW.</b> The maximum all up weight of helicopter for the heaviest configuration including maximum permissible fuel and stores for that particular configuration and complete complement of crew and weight growth margin <b>should not exceed 12000 kg.</b>	
(b)	<b>Reduced All Up Weight.</b> For the purpose of stage through from ICG ships, the helicopter should be capable of operating at a reduced all up weight <b>not exceeding 10000 kg.</b>	

21. Avionics Suite

<u>Sl No</u>	<u>Information Required</u>	<u>Response/Compliance</u>
(a)	<p><b><u>Glass Cockpit.</u></b> Is the helicopter equipped with a certified full glass cockpit containing the following minimum equipment/system? Give details.</p> <ul style="list-style-type: none"> <li>(i) Flight Management System</li> <li>(ii) SAR Search Mode</li> <li>(iii) Tactical/ Mission display system for radar, Electro Optical/Infra-Red Device and AIS with AIS return overlaid on radar display</li> </ul>	
(b)	<p><b><u>Navigation and Landing System.</u></b> Is the helicopter equipped with the following certified navigation and landing equipment? Give details</p> <ul style="list-style-type: none"> <li>(i) VHF Omni Range (VOR)</li> <li>(ii) Instrument Landing System (ILS)</li> <li>(iii) Distance Measuring Equipment (DME)</li> <li>(iv) Integrated Global Positioning System/ Inertial Navigation System (INS) or Dual GPS system</li> </ul>	

<b><u>SI No</u></b>	<b><u>Information Required</u></b>	<b><u>Response/Compliance</u></b>
(c)	<p><b><u>Safety and Emergency Equipment.</u></b> Is the helicopter equipped with the following certified safety and emergency equipment? Give details</p> <ul style="list-style-type: none"> <li>(i) Enhanced Ground Proximity Warning System (EGPWS)</li> <li>(ii) Traffic Alert and Collision Avoidance System II (TCAS II)</li> <li>(iii) ATC Transponder with Altitude Reporting System / Mode C and S Transponder Systems.</li> <li>(iv) Solid State CVR/DFDR with CVR capacity of 03 channels with 120 minutes recording time and DFDR data capacity of 06 hrs</li> <li>(v) Deployable Emergency Locator Transmitter (ELT) transmitting on 406 Mhz, 243 Mhz and 121.5 Mhz (last two frequencies are optional) with CVR/FDR memory module.</li> </ul>	
(d)	<p><b><u>Standby Instrument System.</u></b> Is the helicopter fitted with a standby instrument panel with independent power supply with atleast the following instruments?</p> <ul style="list-style-type: none"> <li>(aa) Attitude Indicator</li> <li>(ab) Magnetic Heading Indicator</li> </ul>	

<b><u>SI No</u></b>	<b><u>Information Required</u></b>	<b><u>Response/Compliance</u></b>
	(ac) Airspeed Indicator  (ad) Altimeter	
(e)	<b><u>Tactical Equipment.</u></b> Is the helicopter able to be fitted with IFF Mk XII (S) as Buyer Nominated Equipment	

22. **Sensor Information**

<b><u>SI No</u></b>	<b><u>Information Required/Remarks</u></b>	<b><u>Response/Compliance</u></b>
	<b><u>Weather cum Surveillance Radar</u></b> Is the helicopter equipped with a new generation digital Surveillance cum weather radar fully compatible with the glass cockpit provided and has the following capabilities? Give details	
(a)	Digital colour radar system. Make and Model of radar fitted/ can be fitted	
(b)	A useful angle of + or 90 <sup>0</sup> in the forward sector, with max range in excess of 100 nm.	
(c)	Capable of detection, classification, tracking and recording of marine targets.	
(d)	Auto tracking features (TWS) for atleast 100 detected targets.	
(e)	Small target detection mode (for search & rescue missions, life rafts.	

<b>SI No</b>	<b>Information Required/Remarks</b>	<b>Response/Compliance</b>																				
(f)	SAR, ISAR and MTI classification modes.																					
(g)	Beacon or SART mode.																					
(h)	Secondary back up weather avoidance and navigation mode with real beam mapping.																					
(h)	<p>Detection Range at ISA + 25°C and relative humidity 80 % the ranges shall be more than:-</p> <table border="1" data-bbox="685 688 1149 1640"> <thead> <tr> <th data-bbox="685 1402 810 1640"><u>Height Band (ft AMSL)</u></th> <th colspan="3" data-bbox="685 688 810 1402"><u>Range in Nm</u></th> </tr> <tr> <th data-bbox="810 1402 894 1640">Target Type</th> <th data-bbox="810 1157 980 1402">Liferaft</th> <th data-bbox="810 926 980 1157">Fast Patrol Boat</th> <th data-bbox="810 688 980 926">Frigate</th> </tr> </thead> <tbody> <tr> <td data-bbox="894 1402 980 1640">1000</td> <td data-bbox="894 1157 980 1402">10 nm</td> <td data-bbox="894 926 980 1157">15 nm</td> <td data-bbox="894 688 980 926">30 nm</td> </tr> <tr> <td data-bbox="980 1402 1065 1640">3000</td> <td data-bbox="980 1157 1065 1402">15 nm</td> <td data-bbox="980 926 1065 1157">20 nm</td> <td data-bbox="980 688 1065 926">40 nm</td> </tr> <tr> <td data-bbox="1065 1402 1149 1640">5000</td> <td data-bbox="1065 1157 1149 1402">20 nm</td> <td data-bbox="1065 926 1149 1157">30 nm</td> <td data-bbox="1065 688 1149 926">70 nm</td> </tr> </tbody> </table>	<u>Height Band (ft AMSL)</u>	<u>Range in Nm</u>			Target Type	Liferaft	Fast Patrol Boat	Frigate	1000	10 nm	15 nm	30 nm	3000	15 nm	20 nm	40 nm	5000	20 nm	30 nm	70 nm	
<u>Height Band (ft AMSL)</u>	<u>Range in Nm</u>																					
Target Type	Liferaft	Fast Patrol Boat	Frigate																			
1000	10 nm	15 nm	30 nm																			
3000	15 nm	20 nm	40 nm																			
5000	20 nm	30 nm	70 nm																			
<b>Electro Optic/ Infra Red Device</b>																						
(a)	Is the helicopter able to be fitted with an Electro/optical payload as Buyer Nominated Equipment																					

<b><u>SI No</u></b>	<b><u>Information Required/Remarks</u></b>	<b><u>Response/Compliance</u></b>
<b><u>Automatic Identification System.</u></b>		
(a)	Is the helicopter equipped with latest generation AIS Integrated with radar or through moving map display?	
<b><u>SAR Direction Finding(DF) Homer</u></b>		
(a)	Is VHF/UHF omni-directional DF homing system provided with DF and Homing capability on 406 Mhz, 243 Mhz and 121.5 Mhz.	

24. **Operational Role Equipment**

<b><u>SI No</u></b>	<b><u>Information Required/Remarks</u></b>	<b><u>Response/Compliance</u></b>
(a)	<b><u>Weapon.</u></b> A 12.7 mm Heavy Machine Gun will be Buyer Nominated Equipment. Weapon to be integrated as a cabin mount in the helicopter.	
(b)	<b><u>Cargo Hook.</u></b> Is the helicopter provided with an external cargo hook/device with a SWL of at least 2500 kilograms?Is there a jettisoning arrangement provided for stores carried on cargo hook?	
(c)	<b><u>Rescue Hoist.</u></b> Is the helicopter equipped with a rescue hoist of lifting capacity 270 kg with	

<b>SI No</b>	<b>Information Required/Remarks</b>	<b>Response/Compliance</b>
	spotlight and provision of emergency cable cutting by explosive and manual devices?	
(d)	<p><b>Searchlight.</b> Is the helicopter provided with a pilot controlled searchlight with following features?</p> <p>(i) Xenon lamp with wattage of up to 1600W.</p> <p>(ii) Peak Luminance – 30 million Candle power</p>	

25. **Communication Equipment.** Is the helicopter equipped with following communication equipment?

<b>S.No</b>	<b>Equipment</b>	<b>Qty</b>	<b>Remarks</b>	<b>Response/Compliance</b>
(a)	VHF / UHF (30 to 400 MHz) AM – FM Trans-receiverCommunication Set	2	<p>(i) Tactical VHF / FM 30 to 88 MHz</p> <p>(ii) Air Traffic Control 118 to 136.975 MHz</p> <p>(iii) Land Mobile AM 136 to 156 MHz</p> <p>(iv) Maritime 156 to 173.975 MHz</p> <p>(v) Military UHF/FM/AM 225 to 399.975 MHz</p> <p>(vi) Guard receivers for monitoring and transmission on 121.5, 243</p>	



			MHz and 406 Mhz. If not provided on the main set, capability should exist as a stand-alone on SAR DF.	
(b)	HF Trans-receiver Communication Set	1	(i) Frequency 2 – 29.9999 (ii) Transmitter 150 watt or more (iii) Voice and HF Data link capability	
(c)	Audio Intercommunication System	1	(i) Facility for all crew members to communicate with one another from their assigned stations (ii) One Communication port outside the helicopter for communicating with ground crew	
(d)	<b>Speech Secrecy equipment</b>		Is the helicopter able to be fitted with Speech Secrecy Equipment as Buyer Nominated Equipment?	

26. **Life Saving Equipment** The aircraft will be operating in coastal areas and over sea for operations. Are these helicopters provided with/ designed for embodiment of following life safety equipment:-

(a) **SAR Equipment.**

<b><u>Sl</u></b>	<b><u>Equipment</u></b>	<b><u>Qty</u></b>	<b><u>Remarks</u></b>
(a)	Rescue Basket	1	
(b)	Loud Hailer	1	

(b) **Crew Safety Equipment.** The following equipment should be able to be supplied with the helicopter:-

<b><u>Sl</u></b>	<b><u>Equipment</u></b>	<b><u>Remarks</u></b>
(a)	Flying Helmets	Flying helmets. For two sets of crew. Light weight, ergonomically designed for tropical climates. With noise cancelling microphones
(b)	Crew Life Raft	With emergency supplies and portable Emergency Location Transmitter.
(c)	Crew Mae Wests	For two sets of crew
(d)	Passenger life jacket	As per seating capacity plus 02 spare. Manually operated CO <sub>2</sub> cylinder type
(e)	Passenger Life Rafts	As per seating capacity

## SECTION II

### MISSION PROFILE

PLEASE GIVE THE PERFORMANCE PARAMETERS OF THE HELICOPTER FOR THE MISSION PROFILES INDICATED

1. Performance figures are to be referenced to ISA + 20°C and the aircraft is to be considered at basic operating weight consisting of helicopter equipped with mission sensors, and equipment [Weather cum Surveillance Radar, Electro Optical/Infra Red Device, Search Light, Rescue Hoist, Automatic Identification System (AIS), air conditioning equipment, speech secrecy equipment, IFF transponder, emergency floatation gear and crew life rafts].

<u>SI No</u>	<u>Mission.</u>	<u>Maritime Surveillance</u>	<u>Maritime Surveillance + Interdiction</u>	<u>Maritime Surveillance + SAR</u>	<u>Rappelling/Slithering</u>
(a)	Crew (@ 85 kg each)	(i) 02	(ii) 03	(iii) 04	(iv) 03
(b)	Mission Specific load		Weaponpayload 200 kg	SAR air droppable Life rafts Smoke markers, dye, flares etc payload of 100 kg	<b>10 Personnel @ 90 kg (with equipment)</b>
(c)	Distance of Patrol Area from base / Cruise altitude	<b>200 nm</b> ≤ 5000 feet AMSL	<b>200 nm</b> ≤ 5000 feet AMSL	<b>200 nm</b> ≤ 5000 feet	<b>100 nm</b> ≤ 5000 feet AMSL
(e)	Mean Cruise Speed (TAS)	≥ 125 knots	≥ 125 knots	≥ 125 knots	≥ 125 knots
(f)	Patrol Height	1000 feet	1000 feet	1000 feet	Not Applicable

<u>SI No</u>	<u>Mission.</u>	<u>Maritime Surveillance</u>	<u>Maritime Surveillance + Interdiction</u>	<u>Maritime Surveillance + SAR</u>	<u>Rappelling/Slithering</u>
(g)	Patrol Speed (IAS)	(i) ≥ 70 Knots	(ii) ≥70 knots	(iii) ≥ 70 knots	(iv) Not Applicable
(h)	Time at Patrol Station(in minutes) Return to base	<b>75</b>	<b>60</b>	<b>60</b>	<b>30</b>
(i)		<b>200 nm</b>	<b>200 nm</b>	<b>200 nm</b>	<b>100 nm</b>
(k)	Hold at 1000 feet over destination	15 minutes	15 minutes	15 minutes	15 minutes
(l)	Usable Fuel reserve on landing	20 min	20 min	20 min	20 min

2. In addition to the above, is the helicopter capable to perform the secondary missions **with or without auxiliary fuel tanks**, details of which are elaborated in the following paragraphs. Performance figures are to be referenced to ISA+20°C and the aircraft is to be considered at basic operating weight consisting of helicopter equipped with mission sensors and equipment [Weather cum Surveillance Radar, Electro-Optical/Infra-Red Device, Search Light, Rescue Hoist, Automatic Identification System (AIS), air conditioning equipment, speech secrecy equipment, IFF transponder, emergency floatation gear and crew life rafts]

**Cargo Transportation.** Is the helicopter capable of the following:-

<u>SI No</u>	<u>Information Required/Remarks</u>	<u>Response/Compliance</u>
(a)	Minimum cargo load of <b>1250 Kg</b> , for a ferry at least up to <b>300 nm</b> with 15 minutes of fuel for holding over destination and 20 minutes of usable fuel reserves on landing.	
(b)	Of transporting its own common support equipment and fly away spare kits to forward operating base for detached operations.	

<u>SI No</u>	<u>Information Required/Remarks</u>	<u>Response/Compliance</u>
(c)	Having stowage space for carriage of essential ground support equipment within the aircraft when deployed at forward operating bases for a period of one month and sustain a flying effort of up to 80 hours	

Personnel Transportation. Is the helicopter capable of the following:-

<u>SI No</u>	<u>Information Required/Remarks</u>	<u>Response/Compliance</u>
(a)	Ferry at least <b>12</b> passengers (80 kg each) to a distance of <b>300</b> nm without removing the equipment specified at Para 2 above.	
(b)	Being re-configured from maritime surveillance and interdiction role to transportation role by a team of not more than five qualified persons within <b>120</b> minutes and vice versa.	

Casualty Evacuation. Is the helicopter capable of the following:-

<u>SI No</u>	<u>Information Required/Remarks</u>	<u>Response/Compliance</u>
(a)	Provision for fitment of at least <b>10</b> standard stretchers to carry <b>10</b> casualties and <b>01</b> attendant seats without removing the equipment specified at Para 2 above.	
(b)	Provision of fitment of <b>02</b> MICU stretchers in lieu of 10 normal stretchers for functioning as an air ambulance	
(c)	Being re-configured from maritime surveillance and interdiction role to casualty evacuation role by a team of not more than five qualified persons within <b>120</b> minutes and vice versa.	

<u>SI No</u>	<u>Information Required/Remarks</u>	<u>Response/Compliance</u>
(d)	Being re-configured from Personnel Transportation role to casualty evacuation role by a team of not more than five qualified persons within <b>120</b> minutes and vice versa.	

3. **Mission Profile at Reduced All Up Weight of 10000 Kg.** Is the helicopter capable to meet the mission profiles at a reduced All Up Weight of 10000 kg **with or without auxiliary fuel tanks**, details of which are elaborated in the table below. Performance figures are to be referenced to ISA+20°C and the aircraft is to be considered at basic operating weight consisting of helicopter equipped with mission sensors and equipment [Weather cum Surveillance Radar, Electro-Optical/Infra Red Device, Search Light, Rescue Hoist, Automatic Identification System (AIS), air conditioning equipment, speech secrecy equipment, IFF transponder, emergency floatation gear and crew life rafts].

<u>SI No</u>	<u>Mission.</u>	<u>Maritime Surveillance</u>	<u>Maritime Surveillance+ Interdiction</u>	<u>Maritime Surveillance +SAR</u>	<u>Rapelling</u>
		(i)	(ii)	(iii)	(iv)
(a)	Crew (@ 85 kg each)	02	03	04	03
(b)	Mission Specific load		BFE payload of 200 kg	SAR air droppable Life rafts Smoke markers, dye, flares etc payload of 100 kg	<b>07 Personnel @ 90 kg (with equipment)</b>
(c)	Distance of Patrol Area from base/	<b>50 nm</b>	<b>50 nm</b>	<b>50 nm</b>	<b>50 nm</b>
(d)	Cruise altitude	≤ 5000 feet AMSL	≤ 5000 feet AMSL	≤ 5000 feet	≤ 5000 feet AMSL

<u>Sl No</u>	<u>Mission.</u>	<u>Maritime Surveillance</u>	<u>Maritime Surveillance+ Interdiction</u>	<u>Maritime Surveillance +SAR</u>	<u>Rapelling</u>
		(i)	(ii)	(iii)	(iv)
(e)	Mean Cruise Speed (TAS)	≥ 125 knots	≥125 knots	≥125 knots	≥125 <u>knots</u>
(f)	Patrol Height	1000 feet	1000 feet	1000 feet	Not Applicable
(g)	Patrol Speed (TAS)	≥ 70 Knots	≥70 knots	≥ 70 knots	Not Applicable
(h)	Time at Patrol Station (in minutes)	<b>75</b>	<b>50</b>	<b>60</b>	<b>10</b>
(i)	Return to base	50 nm	50 nm	50 nm	50 nm
(k)	Usable Fuel reserve on landing	20 minutes	20 minutes	20 minutes	20 minutes