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**GENERAL SPECIFICATION OF MEDIUM HELICOPTER (MULTI ENGINE) (REFURBISHED) -
BLACK HAWK UH 60 L FOR BANGLADESH ARMY-DP-5**

Ser	Subject	Description	To be filled up by Principal/ Supplier	Remarks
PART-1: GENERAL SPECIFICATION				
1.	Model of Helicopter	Blackhawk UH 60 L (Originally produced as L Version)		
2.	Country of Origin	USA		
3.	Country of Manufacture	USA		
4.	Country of Refurbishment	USA		
5.	Year of Manufacture	Not earlier than 1989		
6.	Model Validity	Minimum 20 years		
7.	a. Country of Principal and Beneficiary bank account	USA		
	b. Country of MRO/ Repair Station	USA		
8.	Name of Principal with Complete Address (Office address, Telephone, Fax, Email and Web address)	Details to be mentioned		
9.	Name of MRO/ Repair Station with Complete Address (Office address, Telephone, Fax, Email and Web address)	Details to be mentioned.		
10.	Name of Local Agent with Complete Address (Office address, Telephone, Fax, Email and web address)	Details to be mentioned		
11.	General Function and Operational Capabilities	a. The helicopter should be capable of operating during day and night under all-weather condition.		
		b. The helicopter should be both Day and Night VFR and IFR certified from FAA.		
		c. The helicopter should have fully functional dual control system for pilot and co-pilot.		



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		d. The helicopter should have provision for configuration to perform multi-mission tasks as CSAR, SAR, Armed Recce, air to ground firing and troops transportation.		
		e. The helicopter should be NVG certified and have full NVG compatibility.		
		f. The helicopter should have hard points for both winch and weapons.		
		g. The helicopter should provide protection from small arms fire to vital helicopter components and crew.		
		h. The helicopter should have air conditioning system.		
		j. Provision for future installation of chaff and flare dispensing system.		
PART-2 : TECHNICAL SPECIFICATION				
12.	General Description	Must have all weather day and night VFR & IFR operation capabilities.		
13.	Certification of the Helicopter	To be FAA certified/ approved. (Details to be mentioned and certificate to be provided)		
14.	Helicopter Dimension (Overall Span, length and height)	Standard		
15.	Ballistic Tolerance	To be available. Details to be mentioned		
16.	Crash Resistance	Details to be mentioned		
17.	System Redundancy	Details to be mentioned		
18.	Passenger and Cargo			
	a. Seating Capacity	Standard: 2 (Pilots) + 2 (Gunnery) + 11(Pax)		
	b. Passenger Seating Arrangement	Details to be mentioned in following configurations: a. Standard / Troops transportation Configuration b. Executive seating configuration (2x pilots+2xGunnery+ 2x executive seats+ 8x normal pax seats)		
	c. Cargo loading arrangement	Details to be mentioned about internal and external cargo loading and securing system including weight limit and integral security equipment like cargo net, under sling etc.		
19.	Weight, Endurance and Range			
	a. Ramp Weight	Standard		
	b. Maximum Takeoff Weight	Standard		
	c. Maximum Landing Weight	Standard		
	d. Useful Load	Standard		
	e. Maximum Payload	Standard		
	f. Basic Empty Weight	Standard		
	g. Range and Endurance	Minimum 2.5 hours (MCP) / Minimum 250 NM. (Maximum GW, ISA, Standard fuel)		



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	h. Maximum Zero Fuel Weight	Standard		
	j. Range with standard fuel tank	Standard		
	k. Range with additional fuel tank (If available)	Details to be mentioned		
	l. Cargo Hook/ Under sling Capacity	Standard		
	m. Winch/ Hoist Capability	Minimum 2 persons at a time (600 lbs)		
20.	Other Performances			
	a. Maximum Cruise Speed	Standard		
	b. Normal Cruise Speed	Standard		
	c. Service Ceiling	Standard		
	d. Maximum Operational Altitude	Standard		
	e. Maximum Operational Temperature	Standard		
	Engine and Auxiliary Power Unit			
21.	a. Type of Engine	Turbine engine with Digital Engine Control Unit (DECU)/ Similar		
	b. Number of Engine	Multi Engine		
	c. Brand and Model of Engine	General Electric T700-GE-701D/CC		
	d. Name and address of Manufacturer	GE Aerospace		
	e. Country of Origin	Group A		
	f. Country of Manufacture	Group A		
	g. Country of Assembly	Group A		
	h. Minimum Engine Power Ratings (100% RPM)	Engine Power Rating (For Takeoff) = Minimum 2 x 1662 SHP. Engine Power Rating Continue (MCP) = Minimum 2 x 1662 SHP. Engine Emergency Power (OEI 30") = Minimum 1800 SHP (To be mentioned)		
	j. Engine Operation Life	a. Engine with all associated components should have minimum 3000 hours life available. b. For engine components with individual life, maximum one additional component may be supplied to meet this above-mentioned minimum life requirement		
	k. ETF	0.85 - 1.2		
	l. Main Gear Box	Details to be mentioned including dry run capability in case of MGB oil leakage		



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	m. Type of APU	To be mentioned		
	n. Minimum Engine Power	SHP and Electric power to be mentioned		
	p. APU operation life	Conditional/ minimum 2000 Starts left		
22.	Life of helicopter components except engine components (As per 30K short life report).	a. Minimum remaining total life should be 50% of standard life limit b. To meet the above-mentioned desired life limit, maximum one additional component may be supplied for each component		
Airframe, Fuselage and Cabin				
23.	a. Composition of Airframe	Details to be mentioned		
	b. Country of Origin	USA		
	c. Country of Manufacture	USA		
	d. Country of Assembly	USA		
	e. Country of Refurbishment	USA		
	g. Cabin Dimension	Standard		
	h. Baggage Compartment and Dimension	Standard		
	i. Number and dimension of Doors (Including Cargo Door, if available)	Standard		
	j. Airframe Operation Life	On condition		
	k. Zero-time structural inspection	Completed before delivery		
	l. Corrosion Protection application and documentation	To be applied, if necessary. Details to be mentioned		
	m. Major structural repairs or modification that affects airworthiness	History of major structural repairs or modification that affects Airworthiness is not acceptable		
24.	Air Conditioning System			
	a. Type and Capacity	Minimum 24000 BTU (Electric system). No of duct and compressor to be mentioned		
	b. Brand and Model	To be mentioned		
	c. Name and address of Manufacturer	To be mentioned		
	d. Country of Origin	USA		
	e. Country of Manufacture	USA		
	f. Country of Assembly	USA		
	g. Details of Air Condition	a. It should have temperature control system for both cabin and/ or cockpit. b. Temperature range may be mentioned.		



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	system			
25.	Landing Gear System			
	a. Type of Landing Gear	Wheel type. Standard		
	b. Name and address of Manufacturer	To be mentioned		
	c. Country of Origin	USA		
	d. Country of Manufacture	USA		
	e. Life of Landing Gear System	To be mentioned (Limitation of Landing gear like number of landings before overhaul to be mentioned)		
26.	Tyre			
	a. Type of Tyre	New tyre to be provided. Details to be mentioned (Certified by FAA)		
	b. Brand	To be mentioned		
	c. Tyre size	To be mentioned		
	d. Country of Origin	Group A		
	e. Country of Manufacture	Group A		
	f. Country of Assembly	Group A		
	g. Life of Tyre	To be mentioned		
27.	Rotor			
	a. Type of Rotor	a. Main Rotor: Standard b. Tail Rotor System: Standard		
	b. Brand	To be mentioned		
	c. Rotor size (both)	To be mentioned		
	d. Country of Origin	USA		
	e. Country of Manufacture	USA		
	f. Country of Assembly	USA		
28.	Fuel System			
	a. Fuel Tanks	Details to be mentioned. Should be: a. crashworthy b. self-sealing		
	b. Components of Fuel System	Standard		
29.	Electrical System	Details to be mentioned including system redundancy		
30.	Battery			
	a. Type of Battery	To be mentioned		
	b. Model of Battery	To be mentioned		
	c. Name of Manufacture	To be mentioned		
	d. Country of Origin	USA		
	e. Country of Manufacture	USA		



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	f. Country of Assembly	USA		
	g. Condition of the battery	Brand New		
	h. Life of Battery	To be mentioned		
31.	Avionics and Instruments (New equipment and Latest Version, All equipment must be Provided)			
	Country of Origin and Manufacture to be Group A			
	a. Cockpit	NVG compatible Glass Cockpit (FAA certified /approved). Brand, Model and other details to be mentioned		
	b. Number of Panels (both Pilot and Co-Pilot Side)- Primary and Secondary	3 - 5 Panels. Details to be mentioned		
	c. Digital Moving Map	To be mentioned		
	d. Panel	Brand, model and other details to be mentioned		
	e. Availability of EHSI, EADI, EFIS, EICAS, IESI	To be mentioned		
	f. TCAS	To be mentioned		
	g. HTAWS	To be mentioned		
	h. GPS	To be mentioned		
	j. FMS	Details to be mentioned		
	k. Auto pilot	4 axis auto pilot. Brand, Model and other details to be mentioned		
	l. Weather Radar	Brand, Model and other details to be mentioned		
	m. Communication: if integrated VHF is available (minimum 10 watt).	Details to be mentioned		
	n. Navigation: VOR, ILS, DME, Marker Beacon	Details to be mentioned		
	p. CVR & FDR	Details to be mentioned		
	q. Transponder Mode S	Details to be mentioned		
	r. Radio Altimeter	Details to be mentioned		
	s. Passenger Address System	Details to be mentioned		
	t. ELT	Details to be mentioned		
	u. Standby instruments	Details to be mentioned		
	v. WAAS	Details to be mentioned		
	w. HUMS	Brand, Model and other details to be mentioned		
32.	Hard Point	To be available for Rappelling / Fast Roping and armament.		
33.	Rescue Hoist	To be available		

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34.	Crash protection	To be mentioned		
35.	System Redundancy	To be mentioned		
36.	NVG			
	a. Type of Night Vision	The helicopter should have certified NVG capability with helmet, goggles and other accessories (ANVIS-9 Gen 3 or similar category with white phosphor)		
	b. Brand	To be mentioned (Most upgraded version)		
	c. Country of Origin	Group A		
	d. Country of Manufacture	Group A		
	e. Country of Assembly	Group A		
37.	Fire Protection System			
	a. Power Plant	To be available		
	b. Cockpit, Cabin and Cargo Compartment	Details to be mentioned		
38.	Color	The paint scheme of the aircraft will be as per user's requirement		
39.	Warranty	1 year / 200 flying hours, whichever comes earlier.		
40.	Publications	To be provided as per requirements of user directorate		
41.	Additional Accessories	Brand, model, origin, range, generation (If any) are to be brand new and latest. Details to be mentioned		
	a. Search Light with NVG capability	Brand, Model and other details to be mentioned		
	b. Firefighting bucket / equipment	Brand, Model and other details to be mentioned		
	c. Communication: 2 x independent VHF (minimum 16 watt).	Brand, Model and other details to be mentioned		
	d. Communication: 2 x independent HF (minimum 50 watt).	Brand, Model and other details to be mentioned		
Armament and Munition				
42.	General Requirement	a. Gun Pod and Window Guns (M134 series and M240 series) b. Additional Availability (1) EGMS with gun system and rocket pod to be mentioned (2) CLAWS Wing with rocket pod and Missile Launcher/ Pod to be mentioned (3) 100 x rockets for EGMS and CLAWS wing system (4) Missile warning system: Brand, Model and other details to be mentioned (5) Chaff and flare dispensing system (minimum 20 rounds per helicopter): Brand, Model and other details to be mentioned		



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43	M134 Series Gun			
	a. Name of the Gun	To be mentioned		
	b. Model	To be mentioned		
	c. Country of Origin	To be mentioned		
	d. Country of Manufacture and assembly	To be mentioned		
	e. Year of Manufacture	Brand new (Produced not before 03 years of signing the contract)		
	f. Weapon operating system (Automatic/ Semiautomatic)	To be mentioned		
	g. Caliber (mm)	7.62 mm		
	h. Type and name of compatible ammunition the gun can fire	To be mentioned		
	i. Effective Range (in m)	To be mentioned		
	j. Maximum rate of fire(Round per minute)	To be mentioned		
	k. Sustained rate of fire(Round per minute) (Firing for a prolonged period in operation situation)	To be mentioned		
	l. Barrel Life	To be mentioned		
	m. Number of spare barrels to be provided for each weapon	Minimum 02		
	n. Capacity of ammunition box (Rounds) for each weapon	To be mentioned		
44.	o. Ammunition stowage (Rounds) with specific location	Details to be mentioned		
	p. Gun Pod	To be provided		
	M 240 Series Gun			
	a. Name of the Gun	To be mentioned		
	b. Model	To be mentioned		
	c. Country of Origin	To be mentioned		
	d. Country of Manufacture and assembly	To be mentioned		
	e. Year of Manufacture	Brand new (Produced not before 03 years of signing the contract)		



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Ser	Subject	Description	To be filled up by Principal/ Supplier	Remarks
	f. Weapon operating system (Automatic/ Semiautomatic)	To be mentioned		
	g. Caliber (mm)	7.62 mm		
	h. Type and name of compatible ammunition the gun can fire	To be mentioned		
	i. Effective Range (in m)	To be mentioned		
	j. Maximum rate of fire(Round per minute)	To be mentioned		
	k. Sustained rate of fire(Round per minute) Firing for a prolonged period in operation situation)	To be mentioned		
	l. Barrel Life	To be mentioned		
	m. Number of spare barrels to be provided for each weapon	Minimum 01		
	n. Capacity of ammunition box (Rounds) for each weapon	To be mentioned		
	o. Ammunition stowage (Rounds) with specific location	Details to be mentioned		
	p. Gun Pod	To be provided		
45	EGMS (External Gun Mount System) or Similar with Gun System and Rocket Pod (M260) in Each Side			
	a. Country of origin	To be mentioned		
	b. Country of manufacture	To be mentioned		
	c. Weight	To be mentioned		
	d. Number, Name and caliber of the Guns that can be mounted on the EGMS	To be mentioned		
	e. Number of EGMS per helicopter	Minimum one pair		
46	CLAWS Wing or Similar (Including LWL and M261 Rocket Pod in Each Wing)			
	a. Model	To be mentioned		
	b. Country of origin	To be mentioned		
	c. Country of manufacturer	To be mentioned		
	d. Weight	To be mentioned		
	e. Number, Type and	To be mentioned		



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Ser	Subject	Description	To be filled up by Principal/ Supplier	Remarks
	Caliber of Rocket and Missiles can be fired by the claws wing			
	f. Firing system of the Rocket launcher and Missile launcher of the claws wing	To be mentioned		
	g. Number of hard points per CLAWS Wing	Two in each wing		
	h. Number of CLAWS Wing per helicopter	Minimum one pair		
47.	Delivery Time of the Helicopters	Maximum 12 Months for first 2xHelicopters and rest 2 to be delivered within 18 months from the date of signing the contract		
PART-3: TRAINING REQUIREMENT				
48.	Pilot Training	To be provided as per the requirement of user directorate		
49.	Repair and Maintenance Training	To be provided as per the requirement of EME directorate		
50.	Equipment Management Training	To be provided as per the requirement of ORD directorate		
PART-4: REPAIR AND MAINTENANCE REQUIREMENT LESS LIST OF SPARES				
51.	Repair, Maintenance and Service Support	1. For minimum 3 years or 500 hours after expiry of warranty period. Details clauses are mentioned separately. 2. Price of one engine(with 100% life) to be offered .		
52.	Software and data update of all Avionics and Instruments	To be provided free of cost for 10 years		
53.	Publications	To be provided as per requirements of user directorate/EME directorate		
PART-5: LIST OF SPARES				
54.	Fast and Slow Moving Spares	Not required		
PART-6: TOOL LIST FOR DIFFERENT LEVEL OF MAINTENANCE				
55.	Standard Tools and Accessories	Standard maintenance tools to be provided as per requirement of Electrical and Mechanical Engineers Directorate.		
56.	Special Service Tools(SST), Analyzing, Measuring, Diagnostic Set and Ground Support Equipment	To be provided as per requirement of Electrical and Mechanical Engineers Directorate		
PART-7: FINANCIAL SPECIFICATION				
57.	Financial Specifications	Payment related options and issues are to be mentioned in details.		

