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IMMEDIATE

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22 April 2024

PROCUREMENT OF ARMOURED RECOVERY VEHICLE LIGHT TANK FOR BANGLADESH ARMY.

Reference:

- A. Army Headquarters, General Staff Branch, Armoured Directorate letter number 23.01.901.030.01.011. 02.15.04.24 Dated 17 April 2024 (Not to all).
- 1. Please be informed that, Bangladesh Army is planning to procure **Armoured Recovery Vehicle Light Tank**. Therefore, you are requested to submit following documents/ information in respect of Armoured Recovery Vehicle Light Tank directly to **Army Headquarters**, **General Staff Branch**, **Armoured Directorate**, **Dhaka Cantonment by 02 May 2024** as following:
 - a. Provide information as mentioned in Anx A.
 - b. Catalogue/Brochures (Original in English).
 - c. Parts Catalogue (Original in English).
 - d. List of Standard services Tools and Standard Service Material.
 - e. Technical/training/maintenance/operational manual (Original in English).
 - f. Workshop/Repair manual (Original of the recommended models).
 - g. Manufacturers Authorization certificate to the concerned firm.
 - h. Proper Authorization from principal of the firm/company to signature the contract.
 - j. Valid certificate from Original Equipment Manufacturer as authorized agent, Stocking Depot, Maintenance Center or Authorized Dealer.
 - k. Provision of repair, maintenance and after sale services support from manufacturers.
 - I. The International reputation of the firm/company/principal/manufacturer and quality of particular equipment/item.
 - m. Use of the items by their own defence service.
 - n. Number of clients/ countries using the items/equipment.
 - p. Previous track records of the manufacturer/supplier (both in Bangladesh and other countries).
 - q. Yearly production volume.
 - r. Independent production capability of spares in own factory and degree of maintenance support assurance.
 - s. Line of maintenance facilities of establishment available in Bangladesh (To what items it may be concerned).
 - t. For joint venture companies special care to be taken before evaluation/standardization. Percentage of components in their own country and percentage out sourced to be mentioned.
 - Principal/manufacturer whether having both production and assembly line or not.
 - v. Research and development (R&D), model validly of the equipment facilities of the Company/firm/manufacture.
 - 2. You are also requested to provide enlistment certificate of DGDP along with technical offer. Lack of any information will disqualify the offer.

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Forwarded for your information and necessary action please.

	Swely
	SHEULY AKTER
	Lieutenant Colonel
Annex:	For Director General
A. Preliminary Technical Specification of Armour	ed Recovery Vehicle Light Tank - 14 (Fourteen) Pages only
Distribution:	• • • • • • • • • • • • • • • • • • • •
External:	
Action:	
(All Concerned Supplier/Firm)	
Information:	
Army Headquarters, General Staff Branch, Coord	
Army Headquarters, General Staff Branch, Weapon E	quipment and Statistic Directorate
Army Headquarters, General Staff Branch, Armoured	Directorate
Army Headquarters, Master General of the Ordnance	Branch, Ordnance Directorate
Army Headquarters, Master General of the Ordnance	Branch, Electrical and Mechanical Engineers Directorate
Army Headquarters, Master General of the Ordnance	Branch, Inspection and Technical Development Directorate
Inspectorate of Vehicle & Engineering Equipment, Dh	aka Cantonment
Internal:	

IT Section: Publish in web site.

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> ANX A TO AHO, GS BR (ARMR DTE) LTR NO 23.01.901.030.01.011.02. 04.24 DT: \ 7 APR 2024

PRELIM SPEC OF ARV FOR LT TK

Ser	Description	Proposed Prelim Spec	To be filled
		ropooda romii opod	yd du
	1,		Manufacturer
PAR	1-1: GENERAL SPECIFICATION OF OPERA		
1.	General Purpose and Description	a. The general purpose of the Armoured Recovery Vehicle (ARV) is to carryout recovery and assist repair in the field	
		b. The size, weight and power of the ARV should allow it to go where a Light Tank VT-5 can go c. All the mechanical system	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
		incorporated should preferably be like that of the Light Tank VT-5	
		d. The weapons and armoured are for self defense purpose only e. The ammunition used should be like	
		the existing types f. The radio set should be compatible	
		with the existing radios in all respect	
		g. Spare parts should have sustainable sources	
1		h. Lub oils and hydraulic oils should be of commercially avail grades	
	-2: TECHNICAL SPECIFICATION		
2	Name of Armoured Recovery Vehicle (ARV)	Details to be mentioned	***************************************
3	Name and detailed contact address of the manufacturer	Details to be mentioned	
-[Name and detailed contact address of the Local agent	Details to be mentioned	
5	Name and detailed contact address of the Principal	Details to be mentioned	
	Make Type and Model	Details to be mentioned	***************************************
	Grouping of countries -	Group A,B and C	
<u> </u>	Country of Origin	Group A,B and C	
5	Country of Manufacture	Group A,B and C	
10 ·	Country of Assembly General Data	Group A,B and C	
. 11	a. Combat Weight	33 ± 3 tons	
	b. Crew	To be mentioned	
	c. Ground Pressure (Kg/cm²)	0.70 ± 0.10Kg/cm ²	
	d. Power to weight ratio (hp/ton)	> 25 HP/Ton	
ļ ;	e Ground clearance (mm)	> 400 mm	
- 	f. Combat Operational Temperature	-15° to +55° C	
	Range :-1C ~ +1C)		
-	3 Track		
_	(1) <u>Tread</u> (mm) [Distance petween center of two tracks]	Details to be mentioned	
	(2) Length of Track on Ground	Details to be mentioned	
_	(3) Track to Track Distance	Details to be mentioned	
-	(4) Type of Track Block used	Rubber Padded Steel Track	
_	h. Dimensions		

Ser	Description	Proposed Prelim Spec	To be filled up by Manufacturer
	(1) Length of ARV (mm)		
ļ	(a) Length of ARV (without Dozing Spade/Blade)	Details to be mentioned	
	(b) Length of ARV (with Dozing	Details to be mentioned	
	Spade/Blade) (2) Height of ARV (mm)		
	(2) <u>Height of ARV</u> (mm) (a) Height of ARV without AAMG	Details to be mentioned	
	(b) With AAMG at maximum elevation	Details to be mentioned	
	(3) Width of ARV (mm)		
	(a) Width of ARV without Side Skirt	Details to be mentioned	
	(b) Width of ARV with	Details to be mentioned	
12.	Type of Tank to be recovered	Should be Capable of conducting Recovery Operation (Towing, Pulling, Lifting etc) for Light Tank VT-5	
13.	Power Pack (Engine)		
	a. Make and Model	Details to be mentioned	
	b. Type	Details to be mentioned	
	c. Country of Origin .	Group A,B and C	
	d. Name of the manufacturer	Group A,B and C	
	e. Country of Assembly	Group A,B and C	
	f. Maximum rated Power with RPM (hp at rated RPM)	Details to be mentioned	
	g. Maximum Torque with RPM (N.m at rated RPM)	Details to be mentioned	
	h. Number of Cylinder	Details to be mentioned	
	j. Compression Ratio	Details to be mentioned Details to be mentioned	
	k. Bore, Stroke	Details to be mentioned Details to be mentioned	·
	I. Piston Displacement		
	m. Turbocharger/ Supercharger (if applicable)	Details to be mentioned > 10000 Km / 1000 motor hours	
	n. Engine Life (Minimum Motor Hours before 1st Overhaul)	Details to be mentioned	
	p. Engine basic starting system a. Number of means available to start	Details to be mentioned Details to be mentioned	
	q. Number of means available to start the engine		
	r. Fuel used by Engine/ Power Pack	Diesel	
	s. Engine test bench report	During inspection Engine Test Bench report (for each model) which was prepared by manufacturer during production of engine at manufacturing factory must be produced and submitted to the PSI team for each model	
		(duly signed and stamped by the manufacturer). Other engines (mentioning engine number) of the same model will be certified confirming the engine Test Bench Report by the manufacturer (duly signed and stamped)	
41	Auxiliary Power Unit (APU) (Optional)	Compos)	
14.		To be mentioned	
1	a. Brand and Model		
	b. Type of APU used on ARV	Details to be mentioned	

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Ser	Description	Proposed Prelim Spec	To be filled up by Manufacturer
	d. Name of Manufacturer with	Details to be mentioned	inditti decero.
ı •	complete address (Addresses, Telephone, Fax, Email & Website)	Details to be memored	
	e. Year of Manufacture	Not earlier than the contracted year	
	f Fuel type, delivery and supply	Diesel	
:	system of APU	Details to be mentioned	
		Details to be mentioned	
	g. Maximum power output of APU h. Location of APU on ARV		
		Details to be mentioned	
:	j. Functions of APU	Details to be mentioned	
	k. Type of armour protection available for APU	Details to be mentioned	
15.	Cooling System	entitingtingswerrit mermebilitari at an abanda and an	
	a. Type of Cooling System	Liquid/ Water Cooled	
;	b. Total capacity of coolants/ water in the radiator (Liters)	Details to be mentioned	
16.	Lubrication System		
	a. Total capacity of lubricant in the System (Liters)	Details to be mentioned	
	b. Operating préssure in Lub System (kg/cm²)	Details to be mentioned	
	c. Type of Lubricant	Common commercial grade. Grade to be mentioned	
i	d. Total capacity of lubricant in the Spare	Details to be mentioned	
	Tanks (Liters)	Details to be membered	
17.	Pneumatic System		
17.	- I - I - I - I - I - I - I - I - I - I		
	a. Operating pressure required on Pneumatic System (kg/cm²)	Details to be mentioned '	
18.	Hydraulic system		
	a. Total capacity of hydraulic oil in the tank (liters)	Details to be mentioned	
	b. Type of Hydraulic Oil	Common commercial grade. Grade to be mentioned	
	c. Country of origin	Group A,B and C	manage & more and p. Officeration is advantaged to and all that and add for ability for a
ļ	d. Country of Manufacture	Group A,B and C	minuscan substantion undestantions daste
	e Country of Assembly	Group A,B and C	
19	Steering System	Details to be mentioned	
20	Electric System	Details to be mentioned	
	a. Type, total number, voltage, amphour (AH) of batteries	Details to be mentioned	
	b. Type and number of generator/ alternator used	Details to be mentioned	
	c. Electrical operating power	Details to be mentioned	
21.	Running Gears		
<u>}</u>	a. Suspension	(1) Hydro-pneumatic/ Any other better system	
		(2) Details to be mentioned	
	b. Track Propelling System	Details to be mentioned	
	(1) Type and numbers of Road Wheel	Details to be mentioned	
	(2) <u>Track Block/ Link/ Shoe</u> (Steel track <u>block having provision of</u>		
	fitting rubber pad). The ARV track to be supplied with		
	rubber pad.		
	(a) Type of Track Block used	Details to be montioned	
	(a) Type of Track Breek asea	Details to be mentioned .	

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Width) (mm) (c) Weight of each Track Block (kg) (d) Total weight of each Track (kg) (e) Total numbers of Track Block on each track (g) Eraking System (Preferably hydraulic assisted mech brake) 22. Braking System (Preferably hydraulic assisted mech brake) Einal Drive 3. Country of Manufacture (a. Country of Assembly (forup A,B and C (a. Country of Assembly (forup A,B and C (b. Country of Assembly (forup A,B and C (c. Country of Assembly (forup A,B and C (foru			STRICTED	
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(Preferable Hydraulically Assisted Mechanical Control) b. Speedup/ Connecting/ Transmission Gear Box (If applicable) c. Master Clutch (If applicable) (1) Master Clutch Control Mechanism d. PSM/ Equivalent Steering Mechanism e. Country of Manufacture f. Country of Origin g. Country of Origin Group A,B and C g. Country of Assembly Group A,B and C g. Country of Assembly Group A,B and C Minimum 40 Minimum 40 Minimum 40 km/h Minimum 35 km/h) Maximum Speed (km/h) (1) On cross country road (Minimum 35 km/h) Maximum Speed (km/h) (1) Maximum speed on high way (Minimum 70 km/h) Minimum 60 km/h C. Fuel (Liters) (1) Total fuel capacity on Tank (2) Fuel capacity of external/ drop out tanks (3) Fuel Consumption per			Details to be mentioned	
Transmission Gear Box (If applicable) c. Master Clutch (If applicable) (1) Master Clutch Control Mechanism d. PSM/ Equivalent Steering Mechanism e. Country of Manufacture f. Country of Origin Group A,B and C G. Country of Assembly Group A,B and C Minimum 40 km/h Minimum 40 km/h Minimum 40 km/h Minimum 40 km/h Minimum 35 km/h Minimum 35 km/h Minimum 35 km/h Minimum 70 km/h Minimum 70 km/h (2) Maximum speed on high way (Minimum 60 km/h) (2) Maximum speed on Country road (Minimum 60 km/h) Minimum 60 km/h C. Fuel (Liters) (1) Total fuel capacity on Tank Details to be mentioned drop out tanks (3) Fuel Consumption per		(Preferable Hydraulically Assisted	Details to be mentioned .	
(1) Master Clutch Control Mechanism d. PSM/ Equivalent Steering Mechanism e. Country of Manufacture f. Country of Origin Group A,B and C g. Country of Assembly Group A,B and C 25. Operational Data a. Average Speed (km/h) (1) On high way (Minimum 40 km/h) (2) On cross country road (Minimum 35 km/h) b. Maximum Speed (km/h) (1) Maximum speed on high way (Minimum 70 km/h) (2) Maximum speed on country road (Minimum 70 km/h) (2) Maximum speed on country road (Minimum 60 km/h) (2) Fuel capacity of external/drop out tanks (3) Fuel Consumption per		Transmission Gear Box (If applicable)	Details to be mentioned	
Mechanism e. Country of Manufacture Group A,B and C f. Country of Origin Group A,B and C g. Country of Assembly Group A,B and C 25. Operational Data a. Average Speed (km/h) (1) On high way (Minimum 40 km/h (Minimum 35 km/h) (2) On cross country road (Minimum 35 km/h) (3) Maximum Speed (km/h) (1) Maximum Speed (km/h) (1) Maximum speed on high way (Minimum 70 km/h) (2) Maximum speed on country road (Minimum 60 km/h) (2) Fuel (Liters) (1) Total fuel capacity of external/ drop out tanks (3) Fuel Consumption per	1	(1) Master Clutch Control	Details to be mentioned	
f. Country of Origin Group A,B and C g. Country of Assembly Group A,B and C 25. Operational Data a: Average Speed (km/h)		d. PSM/ Equivalent Steering Mechanism	Details to be mentioned	
f. Country of Origin g. Country of Assembly Group A,B and C 25. Operational Dafa a. Average Speed (km/h) (1) On high way (Minimum 40 km/h km/h) (2) On cross country road (Minimum 35 km/h) b. Maximum Speed (km/h) (1) Maximum Speed on high way (Minimum 70 km/h) (2) Maximum Speed on country road (Minimum 60 km/h) (2) Fuel capacity of external/ drop out tanks (3) Fuel Consumption per		e. Country of Manufacture	Group A,B and C	
g. Country of Assembly Group A,B and C 25. Operational Data a. Average Speed (km/h) (1) On high way (Minimum 40 km/h) (2) On cross country road (Minimum 35 km/h) b. Maximum Speed (km/h) (1) Maximum speed on high way (Minimum 70 km/h) (2) Maximum speed on country road (Minimum 70 km/h) (2) Fuel (Liters) (1) Total fuel capacity of external/ drop out tanks (3) Fuel Consumption per	ſ	f. Country of Origin		
25. Operational Data a. Average Speed (km/h) (1) On high way (Minimum 40 km/h) (2) On cross country road (Minimum 35 km/h) b. Maximum Speed (km/h) (1) Maximum speed on high way (Minimum 70 km/h) (2) Maximum speed on Country road (Minimum 60 km/h) (2) Fuel (Liters) (1) Total fuel capacity of external/drop out tanks (3) Fuel Consumption per	[
a. Average Speed (km/h) (1) On high way (Minimum 40 km/h) (2) On cross country road (Minimum 35 km/h) b. Maximum Speed (km/h) (1) Maximum speed on high way (Minimum 70 km/h) (2) Maximum speed on country road (Minimum 60 km/h) (2) Fuel (Liters) (1) Total fuel capacity on Tank Details to be mentioned drop out tanks (3) Fuel Consumption per	25.			
(1) On high way (Minimum 40 km/h km/h) (2) On cross country road (Minimum 35 km/h) b. Maximum Speed (km/h) (1) Maximum speed on high way (Minimum 70 km/h) (2) Maximum speed on country road (Minimum 60 km/h) (2) Maximum speed on Minimum 60 km/h (3) Fuel (Liters) (1) Total fuel capacity on Tank Details to be mentioned drop out tanks (3) Fuel Consumption per	ļ			
(2) On cross country road (Minimum 35 km/h) b. Maximum Speed (km/h) (1) Maximum speed on high way (Minimum 70 km/h) (2) Maximum speed on country road (Minimum 60 km/h) c. Fuel (Liters) (1) Total fuel capacity on Tank Details to be mentioned (2) Fuel capacity of external/ drop out tanks (3) Fuel Consumption per	-	(1) On high way (Minimum 40	Minimum 40 km/h	
(1) Maximum speed on high way (Minimum 70 km/h) (2) Maximum speed on country road (Minimum 60 km/h) c. Fue! (Liters) (1) Total fuel capacity on Tank Details to be mentioned (2) Fuel capacity of external/drop out tanks (3) Fuel Consumption per		(Minimum 35 km/h)	Minimum 35 km/h	
way (Minimum 70 km/h) (2) Maximum speed on Country road (Minimum 60 km/h) C. Fuel (Liters) (1) Total fuel capacity on Tank Details to be mentioned (2) Fuel capacity of external/ Details to be mentioned drop out tanks (3) Fuel Consumption per	ſ	b. <u>Maximum Speed</u> (km/h)		
country road (Minimum 60 km/h) c. Fuel (Liters) (1) Total fuel capacity on Tank Details to be mentioned (2) Fuel capacity of external/ Details to be mentioned drop out tanks (3) Fuel Consumption per			Minimum 70 km/h	
(1) Total fuel capacity on Tank Details to be mentioned (2) Fuel capacity of external/ Details to be mentioned drop out tanks (3) Fuel Consumption per		country road (Minimum 60 km/h)	Minimum 60 km/h	
(2) Fuel capacity of external/ Details to be mentioned drop out tanks (3) Fuel Consumption per	1_	······································		
drop out tanks (3) Fuel Consumption per	[(1) Total fuel capacity on Tank	Details to be mentioned	
		(2) Fuel capacity of external/ drop out tanks		
km Run (Liters)				
(a) On high way Details to be mentioned		(a) On high way	Details to be mentioned	
(b) On cross country Details to be mentioned	Ī			

Ser	Description	STRICTED Proposed Prelim Spec	To be filled up by Manufacturer
	i d.		Mandiacener
	(1) On high way	.500 + 50 km	
	(2) On country road	400 + 50 km	
i	e. Oil Consumption per 100 km	100 2 00 1(11)	
İ	Run (Liters)		
	(1) On high way	Details to be mentioned	
	(2) On country road	Details to be mentioned	
	f. Fuel (Liters)		
	(1) Total fuel capacity on ARV	Details to be mentioned	
	(2) External/ drop out fuel tank capacity (if available)	Details to be mentioned	
	(3) <u>Fuel Consumption per</u> 100 km Run (Liters/ Hour)		
	(a) On high way	Details to be mentioned	
	(b) On Country Road	Details to be mentioned	
	g. Oil Consumption per 100 km Run (Liters/ Hour)		
}	(1) On high way	Details to be mentioned	
	(2) On country road	Details to be mentioned	
	h. Obstacle Negotiation		
	(1) Maximum Grade Ascending Ability (Degree)	≥ 32°	
	(2) Maximum Side slope ARV can drive (Degree)	≥ 22°	
	(3) Width of Trench ARV will Cross (mm)	≥ 2200 mm	
	(4) Vertical Obstacle ARV will Climb (Escarpment) (mm)	≥ 800 mm	
	(5) Vertical Obstacle ARV will Decent (Counter- Escarpment)	≥ 800 mm	
	(6) Fording depth without preparation (mm)	≥ 1.2 Meters	
	j. <u>Deep Fording (Submerging) –</u>		
	Optional (1) Minimum preparation time	Details to be mentioned	
	required (minutes) (2) Maximum depth the ARV	Minimum 5 meters	<u> </u>
	can submerge (3) Maximum distance the ARV	Details to be mentioned	
	can cross while on deep fording		
26.	Armour Protection	Command David Command	ļ
ļ	a. Country of Origin	Group A,B and C	
	b. Country of Manufacture	Group A,B and C	
-	c. Country of Assembly	Group A,B and C	
]	. d S.ae Sкirt	Details to be mentioned	
i	Type of Armour used on ARV	Type, Composition and Details to be mentioned	
	Armour Thickness and type of		
	ammo can be profected/ profection level		
	(1) Hull	To the section of	
	(a) Nose Armour	To be mentioned	
	(b) Stern Armour	To be mentioned	
	(c) Side Armour (mm)	To be mentioned	

27.	(d) Hull Top and Bottom Armour (mm) (2) Side Skirt (a) Thickness of Side Skirt (mm) (3) Armour Thickness of Repair and Recovery Main Armament a. 12.7 mm AAMG (Warsaw	Proposed Prelim Spec To be mentioned Type; Composition and Details to be mentioned Details to be mentioned	To be filled up by Manufacturer
27.	Bottom Armour (mm) (2) Side Skirt (a) Thickness of Side Skirt (mm) (3) Armour Thickness of Repair and Recovery Main Armament a. 12.7 mm AAMG (Warsaw	Type, Composition and Details to be mentioned	Manufacturer
27.	Bottom Armour (mm) (2) Side Skirt (a) Thickness of Side Skirt (mm) (3) Armour Thickness of Repair and Recovery Main Armament a. 12.7 mm AAMG (Warsaw	Type, Composition and Details to be mentioned	
27.	(2) Side Skirt (a) Thickness of Side Skirt (mm) (3) Armour Thickness of Repair and Recovery Main Armament a. 12.7 mm AAMG (Warsaw	mentioned	
	(a) Thickness of Side Skirt (mm) (3) Armour Thickness of Repair and Recovery Main Armament a. 12.7 mm AAMG (Warsaw	mentioned	
	Skirt (mm) (3) Armour Thickness of Repair and Recovery Main Armament a. 12.7 mm AAMG (Warsaw	mentioned	
	(3) Armour Thickness of Repair and Recovery Main Armament a. 12.7 mm AAMG (Warsaw	Details to be mentioned	
	Main Armament a. 12.7 mm AAMG (Warsaw		
	a. 12.7 mm AAMG (Warsaw		
	Version)		
	(1) Caliber	12.7 mm	
<u>ا</u> ا	(2) Type and Model	Details to be mentioned	
- [(3) Country of Origin	Group A,B and C	*
	(4) Name of Manufacturer	Group A,B and C	
	(5) Weapon Operating	Details to be mentioned	
]	System		
	(6) Loading System	Details to be mentioned	
	(7) Combat Rate of Fire	Minimum 60 rounds/minute	
-	(Rounds/ Minute) (8) Maximum Rate of Fire	500 t 100	
.	(8) Maximum Rate of Fire (Rounds/ Minute)	500 <u>+</u> 100 rounds/minute	
-	(9) Effective range against Air	≥ 1500 m	
	Target (m)	£ 1300 III	
-	(10) Effective range against	≥ 1500 m	
	Ground Target (m)		
}-	(11) Maximum Muzzle Velocity	Details to be mentioned	
	(m/ sec²)	·	
	(12) Chamber Pressure	To be mentioned	
	(13) Maximum Elevation	Details to be mentioned	
-	(Degree)		
	(14) Maximum Depression	Details to be mentioned	
+	(Degree) (15) Maximum Traverse	Details to be mentioned	
	(Degree)	Details to be mentioned	
-	(16) Barrel Life (Rounds can be	Details to be mentioned	
	fired through each barrel)		
<u> </u>	(17) Weapon Firing System	Details to be mentioned	
Ī	(18) Number of spare barrel	Minimum 01 spare barrel is required for each	
_	available for each weapon	weapon	
1	b. Additional Armaments on ARV (if	Details to be mentioned	
1-	applicable) .		·
	c. <u>Ammunition</u> (1) 12.7 mm AAMG		
	(1) 12.7 mm AAMG (a) Dimension of the	12.7 x 107 mm / 12.7 x 108 mm	
	ammunition	12.7 A 107 HHILF 12.7 A 100 HHIL	
}-	(b) Total ammunitions	Details to be mentioned	······································
ļ	per magazine/		
	box		
"	(c) Total ammunitions	Details to be mentioned	
,	stowed on ARV with		
_	number of boxes		
}	' (d) Ammunition Feed	Details to be mentioned	
-	System Char Times of Americanition	Details to be montioned	
	(2) Other Types of Ammunition	Details to be mentioned	
	(if applicable) Repair & Recovery Capabilities		

a. Towing Capabilities in Land (1) Maximum Towing Capability (2) Maximum towing Speed (3) Maximum towing Range (4) Maximum towing Load b. Main Winch Capability (1) Max Pulling/ traction Force (Ton) (a) Single rope without Pulley Block (Ton) (b) With Pulley Block (Ton) (c) Number of Pullies Min 2 (d) Maximum available length of Drag Rope (m) (p) Maximum (p) Dia of steel rope (mm) (g) Rope winding and unwinding speed at max traction Force (m/min)	Spec To be filled up by Manufacturer
(1) Maximum Towing Capability (2) Maximum towing Speed (3) Maximum towing Range (4) Maximum towing Load (5) Maximum towing Load (6) Maximum towing Load (7) Max Pulling/ traction (8) Single rope (9) With Pulley Block (10) (10) With Pulley Block (10) (11) Max Pulling/ traction (12) Force (Ton) (13) Single rope (14) With Pulley Block (15) With Pulley Block (16) With Pulley Block (17) With Pulley Block (18) Win 2 (19) Maximum available length of Drag (19) Rope on Winch (m) (10) Rope winding and unwinding (10) Rope winding and unwinding (10) Dia of steel rope (11) Maximum 35 Ton (12) Minimum 35 Ton (13) Minimum 35 Ton (14) Maximum 35 Ton (15) Dia of steel rope (16) Dia of steel rope (17) Dia of steel rope (18) Minimum 30 mm (19) Rope winding and Details to be mentioned (19) Details to be mentioned	
(1) Maximum Towing Capability (2) Maximum towing Speed Details to be mentioned (3) Maximum towing Range Details to be mentioned (4) Maximum towing Load Details to be mentioned b. Main Winch Capability (1) Max Pulling/ traction Force (Ton) (a) Single rope Minimum 35 Ton without Pulley Block (Ton) (b) With Pulley Block (Ton) (c) Number of Pullies Min 2 (d) Maximum available length of Drag Rope on Winch (m) (e) Maximum (p) Maximum (p) Minimum 30 mm (mm) (g) Rope winding and Unwinding Speed at Details to be mentioned Minimum 35 Ton Details to be mentioned Unwinding Speed at	
(2) Maximum towing Speed Details to be mentioned (3) Maximum towing Range Details to be mentioned (4) Maximum towing Load Details to be mentioned b. Main Winch Capability (1) Max Pulling/ traction Force {Ton} (a) Single rope Minimum 35 Ton without Pulley Block (Ton) (b) With Pulley Block (Ton) (c) Number of Pullies Min 2 (d) Maximum available length of Drag Rope on Winch (m) (e) Maximum To be mentioned operational/ usable length of Drag Rope (m) (f) Dia of steel rope Minimum 30 mm (g) Rope winding and Unwinding Speed at	
(3) Maximum towing Range (4) Maximum towing Load b. Wain Winch Capability (1) Max Pulling/ traction Force (Ton) (a) Single rope without Pulley Block (Ton) (b) With Pulley Block (Ton) (c) Number of Pullies (d) Maximum available length of Drag Rope on Winch (m) (e) Maximum (b) Maximum Rope on Winch (m) (f) Dia of steel rope (mm) (g) Rope winding and unwinding Speed at Details to be mentioned	
(4) Maximum towing Load b. Main Winch Capability (1) Max Pulling/ traction Force (Ton) (a) Single rope without Pulley Block (Ton) (b) With Pulley Block (Ton) (c) Number of Pullies Min 2 (d) Maximum available length of Drag Rope on Winch (m) (e) Maximum operational/ usable length of Drag Rope (m) (f) Dia of steel rope (mm) (g) Rope winding and unwinding Speed at Details to be mentioned Details to be mentioned Details to be mentioned	
b. Main Winch Capability (1) Max Pulling/ traction Force (Ton) (a) Single rope without Pulley Block (Ton) (b) With Pulley Block (Ton) (c) Number of Pullies Min 2 (d) Maximum available length of Drag Rope on Winch (m) (e) Maximum operational/ usable length of Drag Rope (m) (f) Dia of steel rope (mm) (g) Rope winding and unwinding speed at	
(1) Max Pulling/ traction Force (Ton) (a) Single rope without Pulley Block (Ton) (b) With Pulley Block (Ton) (c) Number of Pullies (d) Maximum available Rope on Winch (m) (e) Maximum operational/ usable length of Drag Rope (m) (f) Dia of steel rope (mm) (g) Rope winding and unwinding Single rope Minimum 35 Ton To be mentioned Details to be mentioned	
without Pulley Block (Ton) (b) With Pulley Block (Ton) (c) Number of Pullies Min 2 (d) Maximum available Rope on Winch (m) (e) Maximum To be mentioned operational/ usable length of Drag Rope (m) (f) Dia of steel rope (mm) (g) Rope winding and unwinding speed at	
(b) With Pulley Block (Ton) (c) Number of Pullies Min 2 (d) Maximum available Rope on Winch (m) (e) Maximum To be mentioned operational/ usable length of Drag Rope (m) (f) Dia of steel rope (mm) (g) Rope winding and unwinding speed at	
(c) Number of Pullies Min 2 (d) Maximum available Rope on Winch (m) (e) Maximum To be mentioned operational/ usable length of Drag Rope (m) (f) Dia of steel rope (mrn) (g) Rope winding and unwinding speed at	
(d) Maximum available length of Drag Rope on Winch (m) (e) Maximum To be mentioned operational/ usable length of Drag Rope (m) (f) Dia of steel rope (mrn) (g) Rope winding and unwinding speed at	
(e) Maximum To be mentioned operational/ usable length of Drag Rope (m) (f) Dia of steel rope (mm) (g) Rope winding and unwinding speed at	
(f) Dia of steel rope Minimum 30 mm (mm) (g) Rope winding and Details to be mentioned unwinding speed at	
(mm) (g) Rope winding and Details to be mentioned unwinding speed at	
unwinding speed at	
(h) Drive (Hydrostatic/ Details to be mentioned Mechanical)	
(j) Maximum Support Details to be mentioned Force (Ton)	?
(k) Maximum distance Details to be mentioned between ARV and	
the load during winch op with max number of pulley	
(I) Country of origin Group A,B and C and assembly of main winch	
c. Auxiliary Winch Capability	
(1) Maximum Pulling/ Traction Minimum 3 ton Force of Auxiliary Winch (Ton)	
(2) Maximum available length Details to be mentioned of Drag Rope on Auxiliary Winch (m)	
(3) Maximum operational/ Details to be mentioned usable length of Drag Rope (m)	
(4) Drive (Mechanical/ Details to be mentioned Hydrostatic)	
,5, Country of origin and Group A,B and C	
(6) Dia of steel rope (mm) To be mentioned	
a Earth Dozing Capability	
(1) Width of ARV Dozer Blade Details to be mentioned	
(2) Maximum Bite/ sink of Minimum 80 mm	
(3) ARV Dozer Blade Details to be mentioned	
(4) Earth Dozing/ Moving Minimum 100 m³/h capability (m³/ Hr)	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	!
# Anchor/Spade A-7	

A-7 RESTRICTED

Ser	Description	Proposed Prelim Spec	To be filled up by Manufacturer
·····	(1) Force	80 ton	2340/23/24/2/4/23/03
	(1) Force (2) Deployment Mechanism	Hydraulic	
	f. Lifting Crane		
		4	
	(1) Type of Crane used on ARV(Mechanical/ Hydraulic)	Details to be mentioned	
	(2) Operational Hoisting/ Lifting method of Boom	Details to be mentioned	
	(Mechanical/ Hydraulic)		
	(3) Maximum Lifting Load Capacity (kg)	Minimum 10 Ton	
	(4) Traverse Radius (at max lifting load) (m)	Details to be mentioned	
	(5) Boom Traversing Angle (Degree)	Details to be mentioned	
	(6) Make and Model	Details to be mentioned	
	(7) Boom Length(m)		
	(a) Maximum Length	Details to be mentioned	
	(m)		
	(b) Minimum Length	Details to be mentioned	
	(8) Crane Traversing speed	Details to be mentioned	
	(9) Maximum crane hook lowering and hoisting speed (m/min)	Details to be mentioned	,
	(10) Maximum Lifting Height	Details to be mentioned	
	(m) with maximum load	≥VT5 height (≥2525mm)	
	(11) Country of Origin	Group A,B and C	
	(12) Country of Manufacture	Group A,B and C	
	(13) Country of Assembly	Group A,B and C	
	f. Load Platform Capability	Croop A, S and S	
	(1) Maximum loading	Details to be mentioned	
	area/Piggyback space available on ARV		
	(2) Maximum additional load carrying capacity on ARV (kg)	Details to be mentioned	
	g. Welding & Cutting Operation		
	(1) Type	Details to be mentioned	
	(2) Electrical Welding and Cutting Operational Power (Volt)	Details to be mentioned	
	(3) Electrical Welding and Cutting Operational Current (A)	Details to be mentioned	
	(4) GAS Welding and Cutting capability (Optional)	Details to be mentioned .	
	(5) Max Welding & Cutting operational radius from ARV (m)	Details to be mentioned	
	(6) Maximum Electrode Diameter (mm)	Details to be mentioned	
	(7) Welding & cutting capability using APU of ARV	Details to be mentioned	
	(8) Detail data regarding sources and duration of the power supply for such operations (for both electrical & gas welding/Cutting operations) or possible by APU welding.		
29.	Repair Tools & Accessories	Details to be mentioned	
<u> </u>	Electric Impact Wrench (Optional)	Details to be mentioned	
JU.	Protection System	Dolono to do montioned	

Ser	Description	Proposed Prelim Spec	Yo be filled
001	5000111511011	•	up by
			Manufacturer
	a. Smoke Grenade/ Shrapnel		
	Launcher		
	(1) Number of Launcher with	Details to be mentioned	
	total Smoke Grenades/ Shrapnel		
	available on ARV		
	(2) Warsaw Type (Base firing)	To be mentioned	
	(3) Type of smoke grenade/	Details to be mentioned	
	Shrapnel shell used	Details to be mentioned	
	(4) Caliber of Smoke	Details to be mentioned	
	Grenade/ Shrapnel Shell (mm) (5) Maximum effective range	Details to be mentioned	
	(5) Maximum effective range of smoke grenade/ Shrapnel (m)	Details to be mentioned	
	. (6) Effective area of the	Details to be mentioned	
	grenade	Bottano to bo mondo.	
	(7) Firing system of smoke	Details to be mentioned	
	grenade/ Shrapnel launcher	_	
	(8) Location of smoke	To be mentioned	
	grenade/shrapnel launcher		
	b Thermal Smoke Screen		
	Generation (Through Exhaust Manifold)		
	(1) Rate of diesel discharged	Details to be mentioned	
	on exhaust/ minute (L/min)		
	c. Auto Fire Extinguishing &		
	Suppression System		
	(1) Number of fire	Details to be mentioned	
	extinguisher bottles with location		
	(2) Mode of fire extinguishing	Details to be mentioned	
	Operation (Automatic with manual		
	options)		
	(3) Number of sensors	Details to be mentioned	
	available on ARV		
	(4) Minimum time require to	Details to be mentioned	
	initiate fire suppression operation		
	d. NBC Protection &	Details to be mentioned	
	Decontamination System		
32.	Observation Device		
	a. Day Observation Devices (For ARV		
	Commander)		
	(1) Country of Origin	Group A,B and C	
	(2) Country of Manufacture	G Group A,B and C	
	and Assembly	Catalla ta ba accadio and	
	(3) Type, numbers and model	Details to be mentioned	
	(4) Year of Manufacture	Not earlier than the contracted year	
	(5) Field of view (Degree at	Details to be mentioned	
	narrow and wide angle)	Details to be mentioned	
	(6) Magnification	Details to be mentioned Details to be mentioned	
1 :	(7) Minimum and Maximum	Details to be mentioned	
	Visibility Range		
	b Day Observation Devices (For	-	
	ARV Driver)	Group A,B and C	
	(1) Country of Origin	G Group A,B and C	
	(2) Country of Manufacture	G Gloup A,D allu C	
	and Assembly	Details to be mentioned	
	(3) Type, numbers and model	Not earlier than the contracted year	
	(4) Year of Manufacture		
	(5) Field of view (Degree at	Details to be mentioned	
	narrow and wide angle)		

	(6) Magnification (7) Minimum and Maximum Visibility Range c. Night Viewing Devices (For ARV Commander) (1) Country of Origin (2) Country of Manufacture and Assembly	Details to be mentioned Details to be mentioned Group A,B and C	
	c. Night Viewing Devices (For ARV Commander) (1) Country of Origin (2) Country of Manufacture	Group A,B and C	
	c. Night Viewing Devices (For ARV Commander) (1) Country of Origin (2) Country of Manufacture	Group A,B and C	
	Commander) (1) Country of Origin (2) Country of Manufacture		
-	Commander) (1) Country of Origin (2) Country of Manufacture		
-	(2) Country of Manufacture		
-			
-	AUG ASSECTION	Group A,B and C	
-	(3) Type, numbers and model	Details to be mentioned	
t	(4) Year of Manufacture	Not earlier than the contracted year	
	(5) Field of view (Degree at		
	narrow and wide angle)		
	(6) Magnification	Details to be mentioned Details to be mentioned	
	(7) Minimum and MaximumViewing Range at Dark Night (m)	Details to be mentioned	
ŀ	(8) Minimum and Maximum	Details to be mentioned	
}	Viewing Range at Moonlit and		
	. Clear Night (m)		
	(9) Additional Passive night viewing devices (if available)	Details to be mentioned	
-	(10) In excessive bad weather	To be Provided	
	condition (rain, fog, haze, etc) operator can still see the object		į
ļ	(11) The sys is eye safe as per	To be Provided	
	NATO or equivalent standard		
	d. <u>Night Viewing Devices (For ARV</u>		
ļ	Driver) (1) Country of Origin	Group A,B and C	
ļ	(2) Country of Manufacture	Group A,B and C	
ŀ	and Assembly		
ľ	(3) Type, numbers and model	Details to be mentioned	
Ţ	(4) Year of Manufacture	Not earlier than the contracted year	
	(5) Field of view (Degree at narrow and wide angle)	Details to be mentioned	
	(6) Magnification	Details to be mentioned	
	(7) Minimum and Maximum Viewing Range at Dark Night (m)	Details to be mentioned	
	(8) Minimum and Maximum Viewing Range at Moonlit and Clear Night (m)	Details to be mentioned	
	(9) Additional Passive night viewing devices (if available)	Details to be mentioned	
	(10) In excessive bad weather condition (rain, fog, haze, etc) operator can still see the object		
	(11) The sys is eye safe as per NATO or equivalent standard	To be Provided	
	e. Operating/Stowage Condition		•
}	(For FCI Egpt) (1) Operating Temperature	-20° to +55° C	
	(1) Operating Temperature Range	-20 10 T33 C	
	(2) Storage Temperature	-20° to +55° C	
	Range		

A-10 RESTRICTED

Ser	Description	ESTRICTED Proposed Prelim Spec	To be filled
			up by Manufacturer
	(3) Humidity Permissible Condition for Operation	95%	
	(4) Operation during fog, rain, and snow	To be possible	
33.	Communication System	All ARVs are to have VHF Radio sets. Any standard VHF (Base &Veh) version may be proposed which is compatible to Radio set CB6 pro VHF. Minimum 3 Radio sets will undergo test and trial at Bangladesh for testing its minimum & maximum communication range at Bangladesh test condition before minimum 6 months prior to delivery of ARV in Bangladesh.	
	a. VHF Radio Set		
	b. <u>General Description</u>	(Must be a robust original IC based modular digital ARV VHF Radio set which is compatible to Radio set CB6 pro VHF)	
	(1) Type	Details to be mentioned	
	(2) Brand and Model	Details to be mentioned .	
	(3) Country of Origin and Manufacture	Group A,B and C	
	(4) Name of Manufacturerwith complete address (Addresses,Telephone, Fax, Email & Website)	Details to be mentioned	
ĺ	(5) Year of Manufacture	Not earlier than the contracted year	
	(6) Frequency Range	Within 30 ~ 88 Mhz. Above 88 MHz is also allowed	7
	(7) Total numbers of Channels available	Details to be mentioned	
	(8) Channel Spacing	To be compatible with Radio set CB6 pro VHF. Details to be mentioned	
į	(9) Operating Power Input	Details to be mentioned	***************************************
ľ	(10) Power Output (Watt)	Details to be mentioned	***************************************
[(11) <u>Power Consumption</u> (Watt)		
ļ	(a) At Transmission Mode	Details to be mentioned	
	(b) At Reception Mode	Details to be mentioned	
ļ	· (12) RF Shielding and Filter	Details to be mentioned	nii Maanadhiilaani intersii in ma'r Ighannaan midaga waxaa i laanaan daag
	(13) Communication Access (14) <u>Maximum</u> Communication Range (Km)	For ARV Cornmander, Driver & Operator	
-	(a) Static to Static	≥ 15 km	
-	(b) On Move	≥ 10 km	
-	.15) Type of Radio Set Mounting	Must have robust shock absorbing mounting	
	(16) <u>Radio Antenna</u> (Flexible Original Tank VHF Radio Antenna)		
	(a) Rod Antenna (m)	Details to be mentioned	
_	(b) Emergency Auxiliary - nenna (if applicable)	Details to be mentioned	
-	(c) Number of Segments ນາກ Antenna	Details to be mentioned	

A-11 RESTRICTED

	11	STRICTED	
Ser	Description ,	Proposed Prelim Spec	To be filled up by Manufacturer
	(17) SMS and Data Facility	Minimum 16 kbps Data and SMS facility to be available	
	(18) BITE	Should be available	<u> </u>
	(19) Security features		
	available in the set		
	(a) Standard	Details to be mentioned	
	Encryption		
	(b) Frequency	Details to be mentioned ·	
	Hopping		
	(c) Other Types of	Any other types of communication Security (if	
	Security (Optional)	available) are to be mentioned	
	(20) Environmental Standard		
	(a) Shock and	As per Military Standard 810 E/F/G	
	Vibration Proof		
	(b) Dust Proof	As per Military Standard 810 E/F/G	
	(21) IP Facility (Optional	Details to be mentioned	
	Feature)		
	(22) Power Supply System	a. To be operated from 12/24V vehicle	
		power sourcé (preferable)	
		b. DC rechargeable and replaceable battery	
		may be proposed. Detail of brand, model,	
		country of manufacture and battery rating are	
		to be mentioned	
		c. The battery should have charging facility from vehicle systems (preferable)	
		d. For BD Army Standardized Radio Sets,	
	·	the manufacturer will ensure smooth	
		integration of the complete Radio set to the	; ;
	ner	ARV system.	
	(23) List of standard accessories	Details to be mentioned	
	(24) List of optional accessories (if required)	Details to be mentioned	
	ç, <u>Intercom</u>	Must be a robust original IC based digital tank Intercom Set.	
	(1) Type	Details to be mentioned	
		Details to be mentioned	
		Details to be mentioned	
	(3) Country of Origin and Manufacture	Details to be mentioned	
	(4) Year of Manufacture	Not earlier than the contracted year	
	(5) Provisions	All Crews	
٢	(6) Communication Connectivity	All Crews simultaneously with min ARV Commander & Gunner's access to all Radio sets	
34.	Special Equipment (Any special . equipment that has not been mentioned	Details to be mentioned	
	above)		
35.	Miscellaneous		
	a. ARV Onboard Fitted Items	Details list of all onboard default fitted items to be mentioned	
	b. Painting	Options of available different types of camouflaged painting diagram/ pictures to be provided	
	c. Remote Control system for	01 x remote control sys per ARV.	
	winch/recovery operation (Optional)	Details to be mentioned.	
	d. 12.7 mm AAMG Calibrating/ Bore		
	Sighting Telescope		
	(1) Quantity	01 Telescope for each ARV	
	I CO Guarinity	A-12	J

A-12 RESTRICTED

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		ESTRICTED	
Ser	Description	Proposed Prelim Spec	To be filled up by
	(2) Model		Wanufacturer
i	(2) Model	To be mentioned	<u> </u>
	(4) Country of Origin and	To be mentioned	
	Manufacture	Details to be mentioned	
	(5) Year of Manufacture	Not earlier than the contracted year	
	(6) Provisions ,	All Crews	
		To be provided	
	e. (8) List of all accessories a. 12.7 mm AAMG Ammunition Belt	To be providéd	
]	Mechanical Loader/ Feeder	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
[f. Refueling/ De-fueling Pump	be mentioned.	
		01 Pump per ARV	
ļ	g. Electric Portable Drill Machine h. Portable Grinder	01 per ARV	************************************
Ì	j. Any software, if used for any	01 per ARV	
	system in the ARV	Details to be mentioned	
	k. Any Navigation System (If available)	Details to be mentioned	
		Model, Brand, Country of Origin and manufacture to be mentioned.	
		Manual and list of all accessories to be provided	
36.	Special Items/ Equipment (Provisions of all special items/equipment those can be fitted on ARV to be mentioned)	Details to be mentioned	
37.	All equipment's, components, radio sets and weapon system, all sights etc of ARV will be Brand New and will be manufactured not before the year of contract	Manufacturer will provide guarantee certificate on that	
38.	All components should be able to withstand minimum 95% humidity or above typical to Bangladesh weather	Manufacturer will provide guarantee certificate on that	
39.	All components i.e. panel boards, gauges, instruments etc marking and display reading should be in English Language	To be confirmed by the Manufacturer	
	-3: TRAINING REQUIREMENT		
40.	Training		
	a. <u>Training Abroad</u> (ARV Manufacturing Plant Abroad before delivery of ARV)		
	(1) Users' Training. (Armour Corps)	Consolidated detailed training requirements will be provided separately during the tender bid	
	(2) Repair and Maintenance Experts' Training (EME Corps)	Consolidated detailed training requirements will be provided separately during the tender bid	
	b <u>Training in Bangladesh</u> (A. Respective Training Institution/ V. arcanop after delivery of the 1st Batch of AR /s to BD)		
	(1) Users' Training. (Armour Corps)	Consolidated detailed training requirements will be provided separately during the tender bid	
	(2) Repair and Maintenance Experts' Training. (EME Corps)	Consolidated detailed training requirements will be provided separately during the tender bid	
, 	(3) Training on SST, Special Testing equipment, performing testing	Consolidated detailed training requirements will be provided separately during the tender	

A-13 RESTRÌCTED

r		STRICTED Proposed Prelim Spec	To be filled up by
ar	Description		Manufacturer
		bid	
	equipment, fault finding & rectification gadgets.(EME Corps) (4) Inventory Con. and Management Experts' Training. (Ordnance Corps)	Consolidated detailed training requirements will be provided separately during the tender bid Consolidated detailed training requirements	
	c. Training for FCI and Communication Sys (ITD Dte)	will be provided separately during the	
	T-4: REPAIR AND MAINTENANCE REQUIR	REMENT LESS LIST OF 31 AINES	
41.	a. ARV Tools Box (Fitted on ARV)	ARV integral all essential tools to be fitted (Detailed list of items to be mentioned by the Supplier) 01 x complete set per ARV to be provided by	
	b. ARV Spares, Tools and Accessories	the supplier (Detail list of items to be mentioned by the Supplier)	
42.	publications to be written in English	u domand (of l
	Language) a. Operational Manuals for all	01 x set per ARV + as per the demand of Armour and EME Directorates of AHQ As per the demand of Armour and EM	
	b. Maintenance and Repair Manuals for all systems	As per the demand of Armost Directorates of AHQ As per demand of EME Directorates of AHC	
	c. 100% Master Spare Parts Catalogue (Parts Catalogue)		
4	ART- 5: LIST OF SPARES Provision of 10% Fast Moving Spare Pare	rts As per the demand of EME Directorates AHQ AHQ AHQ AHAINTENANCE	
P/		LOTIVA	
	4. Special Parts, 1001s and 7,005 (SPTA) (SPTA)	Details list to be provided by supplier	
	5 Special Service Materials (55M)		
P,	ART- 7: FINANCIAL SPECIFICATIONS	To be provided during tender submission	
4	5. Financial Specifications 5	Minimum 20 Years Minimum 20 Years	
	6. After sell Service Support op. 7. Model Validity	MINIMUM 20 TOOLS	