

Tele : 34001

Email : skyplan-94@gov.in



Directorate General of
Army Air Defence (AAD-7)
General Staff Branch
Integrated HQ of MoD (Army)
Serla Bhawan
DHQ PO, New Delhi-11

50048/ADGMSP/RFI/21 /GS/AAD-7

07 Jul 2023

(Vendor Concerned)

**REQUEST FOR INFORMATION (RFI) FOR PROCUREMENT OF
AIR DEFENCE GUN MISSILE SYSTEM (SELF PROPELLED)
{AD GM SYSTEM (SP)}**

1. Ministry of Defence, Government of India, intends to procure **Air Defence Gun Missile System (Self Propelled) {ADGM Sys (SP)}**. In view of the above, companies/firms/vendors are requested to forward information on the product which you can offer as per requirement parameters. The broad parameters/specifications of the item are mentioned at **Appendix A**.
2. In addition, the Vendors are required to furnish details as per proforma attached at **Appendix B**. Apart from the information as per the Appendices, the companies/firms/vendors are also requested to forward additional technical details/product brochures/literature etc pertaining to the equipment intended to be procured. A suggested format for furnishing the same is given at **Appendix C**.
3. This Request for Information (RFI) consists of Three Parts as indicated below:-
 - (a) **Part I**. The first part of the RFI (enclosed as **Appendix A**) incorporates operational & technical characteristics and features that should be met by the equipment. Amplifications or comments to changes suggested if any, may also be made in order to facilitate review of the operational requirements.
 - (b) **Part II**. The second part of the RFI states that conditions to be acceptable to Vendors and methodology of seeking response from vendors. Submission of incomplete response format could render the vendor liable for rejection.
 - (c) **Part III**. Guidelines for Framing Criteria for Vendor Selection/Pre-Qualification in Buy (Indian-IDDM), Buy (Indian) and Buy & Make (Indian) cases (enclosed as **Appendix D**).

PART-I

4. **Intended Use of Equipment (Operational & Technical Requirements)**. Broad Operational & Technical Requirements/Parameters of **Air Defence Gun Missile System (Self Propelled) {ADGM Sys (SP)}** are enclosed at **Appendix A**. Apart from the information as per the Appendix, the Vendors are also requested to forward technical details/product brochures /literature etc pertaining to the equipment intended to be procured. A suggested format for the same is given at **Appendix C**.

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

- (a) The solicitation of offers will be as per 'Single Stage-Two Bid System'. It would imply that a 'Request for Proposal' would be issued soliciting the technical and commercial offers together, but in two separate sealed envelopes. The validity of commercial offers would be at least 18 months from the last date of submission of offers.
- (b) The technical offers would be evaluated by a Technical Evaluation Committee (TEC) to check its compliance with RFP.
- (c) The equipment of all TEC cleared vendors would be put through a trial evaluation in India on a 'No Cost No Commitment' basis. A staff evaluation would be carried out by SHQ to analyse the result of field evaluation and shortlist the equipment for introduction into service.
- (d) Amongst the vendors cleared by GS evaluation, a Contract Negotiations Committee would decide the lowest cost bidder (L1) and conclude the appropriate contract.
- (e) Vendor would be bound to provide product support for time period specified in the RFP, which includes spares and maintenance tools/jigs/ fixtures for field and component level repairs.
- (f) The vendor would be required to accept the general conditions of contract given in the Standard Contract Document at Chapter VI of DAP.
- (g) **Integrity Pact (if applicable)**. An integrity pact along with appropriate IPBG is a mandatory requirement in the instant case.
- (h) **Performance-Cum-Warranty Bond**. Performance-Cum-Warranty Bond both equal to 5% value of the contract inclusive of taxes and duties is required to be submitted after signing of contract.
- (j) **Indigenous Content (IC)**. A minimum of 50% IC for Buy (Indian-IDD), 60% IC for Buy (Indian) and 50% on cost basis of the make portion for Buy & Make (Indian) will be present in the equipment as per provisions of DAP 2020.
- (k) **Engineering Support Package (ESP)**. The details of ESP for the equipment are to be provided.

PART-II

6. The Indian Army is planning to procure **Air Defence Gun Missile System (Self Propelled) {ADGM Sys (SP)}**. In view the above, Vendors are requested to forward information on the product which you can offer as per requirement parameters. The broad parameters/specifications of the item are mentioned at **Appendix A**. In addition, the Vendors are required to furnish details as per proforma attached at **Appendix B** as per provisions of Annexure II to Appendix A of Chapter II of DAP 2020. Guidelines for Framing Criteria for Vendor Selection/Pre-Qualification in Buy (Indian-IDD), Buy (Indian) and Buy & Make (Indian) cases as per provisions of Annexure IV to Appendix A of Chapter II of DAP 2020 is attached at **Appendix D**.

7. Apart from the information as per the Appendices the vendors may also forward additional technical details/product brochures/literature etc pertaining to the equipment in question. The suggested format is given at **Appendix C**.

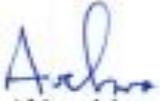
8. Vendors are also requested to furnish the cost estimate for the equipment as per format given below:-

Qty / Nos	Prototype Cost	Prototype Development (In Weeks)	Production Cost	Delivery Timelines (in Months)
24 Sys				
48 Sys				
72 Sys				
More than 72 Sys				

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

10. The required information/details may please be forwarded at the following address by **31 Aug 2023** :-

Directorate General of Army Air Defence
General Staff Branch/AAD-7
Room No-608, D-1 Wing
Integrated HQ of MoD (Army)
Sena Bhawan, DHQ PO
New Delhi-110011
E-mail : skyplan-94@gov.in


 (Ajay Verma)
 Colonel
 Col AD (GM-SP)

Enclosures: As above.

Copy to :-

ADG/ADB (T&WS) - For info and necessary action please.

BROAD PARAMETERS/SPECIFICATIONS FOR AIR DEFENCE GUN MISSILE SYSTEM (SELF PROPELLED) {AD GM SYSTEM (SP)} FOR ARMY AIR DEFENCE

1. **Introduction.** To provide close AD protection to mechanized formations against evolving and dynamic air threat, Army Air Defence requires Air Defence Gun Missile System (Self Propelled) {AD GM System (SP)} as a Mobile Terminal Air Defence System.

2. **System Visualisation.**
 - (a) The system should have matching mobility with mechanized elements in all terrains while operating as embedded AD in all their maneuvers and tactical operations.

 - (b) The weapon system should be a mix of both gun and missile mounted on a single/dual platform of either tracked/wheeled vehicle (HMTV 6x6/HMTV 8x8).

 - (c) The system should include a low RCS 3-D Acquisition cum Fire Control Radar, Electro Optical Fire Control System (EOFCS) and a Fire Control Computer (FCC).

 - (d) The Gun should be able to engage aerial targets both with the Fire Control Radar and through the EOFCS both during day and night. While the missile should be able to engage targets through the EOFCS both by day and night.

 - (e) The system should be able to carry out Acquisition and Tracking of the targets on the move and engage aerial targets effectively with gun on the move and with missile on short halts.

 - (f) The system should have the capability to engage fighter aircrafts, helicopters (including hovering helicopters), Unmanned Aerial Vehicles (UAV), Unmanned Combat Aerial Vehicles (UCAV) and Cruise Missiles.

3. **Proposed Service Employment.**
 - (a) AD GM System (SP) will be used by Army Air Defence for providing embedded, Close Air Defence to mechanized formations against low level air threat in intense EW environment.

 - (b) The system will be deployed in all terrains like plains, deserts, high altitude & mountainous area (upto 5000m).

Operational Parameters

4. The AD GM System (SP) should have the capability of quick deployment and redeployment in field conditions with following parameters:-

S No	Parameter	Requirement
General		
(a)	Terrain	The system is proposed to be employed across all terrain in the country. These are as follows :- (i) High Altitude & Mountainous Area - upto 5000m. (ii) Plains and Deserts.

S No	Parameter	Requirement
(b)	Physical Environment as obtained in India	<p>AD GM System (SP) should be able to operate under all weather conditions & areas including in snow bound locations:-</p> <p>(i) <u>Operating Temperatures.</u></p> <p>(aa) Min Temp - Minus 20⁰C.</p> <p>(ab) Max Temp - Plus 45⁰C.</p> <p>(ii) <u>Storage Temp.</u> Minus 30⁰C to Plus 55⁰C.</p> <p>(iii) <u>Humidity.</u> Upto 98%.</p>
(c)	Weight	The combat weight of the system (less crew, ammunition and fuel) should not exceed 15 T (± 10%) (less vehicle weight).
(d)	Dimensions	The Physical dimension including its weight should be such that the equipment can be transportable by service Rail on broad gauge with ODC, Road (on Tank Transporter), Ship and Air (C-17 Aircraft).
(e)	Endurance & Protection	<p>(i) The equipment should be able to move a distance of 50 km in a day with 8 hours of operation of the systems with on board fuel tank without refueling.</p> <p>(ii) Range of move (without refuelling) greater than 320 km in all terrains.</p> <p>(iii) Should have appropriate protection standard against small arms fire (7.62 mm) and shell splinters equivalent to STANAG level 2/3 (or better) (ballistic protection) for top frontal arc, rear, sides including fuel tank and other external fittings such as APU and ECU.</p>
(f)	Mobility and Speed	<p>The equipment should negotiate :-</p> <p>(i) Longitudinal slope of upto 30 deg (±5%).</p> <p>(ii) Transverse slope of upto 25 deg (±5%).</p> <p>(iii) Vertical step of 0.85 m (±5%) while moving off rd.</p> <p>(iv) Speed :-</p> <p>(aa) Metalled Road- 60 kmph (±5%).</p> <p>(ab) Unmetalled Road - 50kmph (±5%).</p> <p>(ac) Average Speed Cross country-40kmph (±5%)</p> <p>(v) The mount should be able to carry out shallow fording of minor water obstacle of 1.2 M (+ 5%) depth.</p>
(g)	Power to Weight Ratio for all vehicles	Engine should be able to provide Power to Weight Ratio of 18:1 HP/T or more with full combat weight in each vehicle.

S No	Parameter	Requirement
(h)	Power Supply System	<p>(i) <u>Main Power Supply System.</u> The system including all its components should be capable of being operated from on-board power supply system with a provision of tapping power supply from the main engine.</p> <p>(ii) <u>Auxiliary Power Supply System.</u> The system should have inbuilt ability to generate requisite power supply using main engine as power take off generator to switch on the electronic system/ components. Switching of power supply arrangement from main power supply system to auxiliary power supply system should be smooth & it should not affect functioning of the system adversely. This alternate power system should be able to support operations, power the Radar, On Board Computer and Gun & Missiles systems.</p> <p>(iii) <u>External Power Supply.</u> A mobile generator to be provided, which can be used during training, maintenance and repair of the system.</p> <p>(iv) All systems should also be able to use commercial main (220V, 50 Hz) wherever available with or without a converter.</p> <p>(v) The system should be compliant as per relevant provisions of JSS:55555 and 5855-11:2019(Rev-I) (as applicable).</p>
(j)	Crew	Not more than 4 personnel including Driver when in a single vehicle configuration and not more than 5 personnel when in a two vehicle configuration.
(k)	Radar	The low RCS Radar should be based on 3-D Active Electronically Scanned Array with digital beam forming and should have multifunction capability to include Track While Scan(TWS) and work through jamming. It should be capable of 360 deg surveillance, target detection and tracking.
(l)	EOFCS	<p>In addition to radar tracking, Electro Optical Fire Control System should be incorporated for angular tracking of air targets during day and night, snow, rain, dust and poor visibility conditions. The EO device should consist of Thermal Imaging (TI) sight and optical sight for tracking during day and night. The range details will be provided by the Laser Range Finder (LRF).</p> <p>(i) Day and Night sight range – minimum 8 Km for identification of flying object.</p> <p>(ii) LRF Range - Not less than 8 Km.</p> <p>(iii) Should ensure target engagement by Guns and Missiles during Day and Night.</p>

S No	Parameter	Requirement
(m)	Missile System	Should be able to engage all types of Aircraft, Helicopters (including Hovering), Attack Helicopters, UAVs, UCAV, Cruise Missile and standoff ammunition at a range of not less than 6500 m.
(n)	Gun System	Radar/EOFCS controlled Gun should be capable of firing Programmable Proximity Fuze/Proximity Fuze/HE Amn.
(o)	Communication	(i) External Communication. Provision for fitment of three radio sets (out of which one should be a Software Defined Radio):- (aa) Data communication for transmission and receiving of Target data. (ab) Voice communication with secrecy device. (ac) Software Defined Radio. (ii) Internal Communication. Digital internal communication system for crew members. (iii) Compatible Radio communication with the supported formation/assets on move.
(p)	Navigation	The navigation system (NavIC/ IRNSS/ GPS/ GLONASS) should be capable of operating both by day and night to facilitate cross country move of equipment.
(q)	Drivers Night Sight	Drivers Night Sight capability should be there.
(r)	EMI/EMC compatibility	The system should be EMI/EMC compliant as per relevant provisions of MIL Standard 461 E.
(s)	BITE	The system should have Built in Test equipment to check the serviceability as an integrated system.

Technical Parameters.

5. The AD GM system (SP) must fulfill the following technical parameters/capabilities: -

S No	Parameter	Requirement
Surveillance and Detection Radar		
(a)	Detection	The AESA Search Radar of the system should provide continuous three dimensional (3D) surveillance of aerial platforms in the area of responsibility. The radar should be able to detect fighter aircrafts, helicopters (including hovering helicopters), Unmanned Aerial Vehicles (UAV), Unmanned Combat Aerial Vehicles (UCAV) and Cruise Missiles. It should have capability of processing targets in TWS mode and be capable of 360 deg surveillance and target detection.

S No	Parameter	Requirement
(b)	Detection Range	<p>(i) The Search radar should be capable of detecting a low altitude target at 30 m (above obstacle level) not less than 20 Km subject to radar horizon/line of sight. The Search radar should be capable of detecting aerial targets as under :-</p> <p>(aa) $RCS \leq 1 \text{ m}^2$ up to 20 km at 30° elevation (FGA Aircraft).</p> <p>(ab) $RCS \leq 0.05 \text{ m}^2$ up to 10 km (Attack Helicopter).</p> <p>(ac) $RCS \leq 0.01 \text{ m}^2$ up to 05 km (UAS/CM).</p> <p>(ii) Min Range not more than 300 m.</p>
(c)	Accuracy	
	(i) Azimuth	≤ 0.5 Degrees
	(ii) Range	≤ 30 m
	(iii) Elevation	≤ 0.5 Degrees
(d)	Resolution/ Discrimination	
	(i) Azimuth	≤ 1 Degrees
	(ii) Range	≤ 50 m
	(iii) Elevation	≤ 2 Degrees
(e)	Elevation Coverage	Minimum not more than minus 5° and maximum not less than 70° . Total cumulative coverage of minimum 75 degree.
(f)	Target Speed	Detection of target should be upto 850 m/s with the capability to detect fighter aircraft, hovering target, helicopters, UAVs/Drone/UCAV and Cruise Missiles.
(g)	Identification Friend or Foe (IFF)	It should have provision for integration with IFF system being used in three services.
Tracking Radar		
(h)	<u>Tracking</u>	
	(i) Acquisition	Acquisition by both radar and electro optronic means should be possible.
	(ii) Tracking Capability	The track radar should be capable of three dimensional (3D) position measurements of the target and provide the system with accurate target data to facilitate successful engagements.

S No	Parameter	Requirement
	(iii) Tracking Ranges	<p>The Track radar should be capable of tracking aerial targets as under:-</p> <p>(aa) $RCS \leq 1 \text{ m}^2$ up to 20 km.</p> <p>(ab) $RCS \leq 0.05 \text{ m}^2$ up to 10 km.</p> <p>(ac) $RCS \leq 0.01 \text{ m}^2$ up to 05 km.</p>
(j)	Tracking Accuracy	<p>(i) Azimuth $\leq 0.06 \text{ Deg}$</p> <p>(ii) Range $\pm 10 \text{ m}$</p> <p>(iii) Elevation $\leq 0.06 \text{ Deg}$</p>
(k)	Data updation	Not more than 1 sec.
(l)	Antenna system	Active Electronic Steering Antenna system. The radar antenna should be capable of being folded/ packed during transportation and should be transported in a secured manner.
(m)	Electronic Counter Counter Measures (ECCM)	<p>The radar should be able to operate effectively in Air Defence Electronic Counter Measures (ECM) environment caused by ground based and air borne active and deception jammers. The system should have following ECCM :-</p> <p>(i) Facilities to work through jamming.</p> <p>(ii) Facility to lock on jammer.</p> <p>(iii) Facilities to counter deception jamming in range, azimuth and velocity.</p> <p>(iv) Facilities to counter anti tracking measures.</p> <p>(v) Side lobe cancellation.</p> <p>(vi) Random PRF.</p> <p>(vii) Frequency Hopping Spread Spectrum (FHSS).</p> <p>(viii) Facility for sector blanking.</p> <p>(ix) As an anti-Anti Radiation Missiles (ARM) measure, facility should be provided so that radar can be programmed to automatically switch off on detection of ARM launch on the radar in any operator chosen direction.</p>

S No	Parameter	Requirement
(n)	Display system	<p>The display system should have high definition colour display where the actual radar picture should be presented. The display should have both PPI as well as synthetic display facilities. The display system should cater for the following :-</p> <ul style="list-style-type: none"> (i) Air Surveillance picture with the moving targets, including assignment of target number should be automatic. Manual option should be available. (ii) Display of alphanumeric data of the target as on required basis. (iii) Display of tracks. (iv) Initiation and cancellation of track display. (v) A Georef/ grid/ lat-long overlay. <ul style="list-style-type: none"> (aa) Use of DSM maps. (ab) Use and display of GIS software. (vi) Range and bearing markers. (vii) Choice of suitable display ranges and employing 5 km range rings with minimum range display of 10 km and maximum range display of 20 km. (viii) Display of Identification Friend or Foe (IFF) information. (ix) Display of air space control data, non-validation zones and auto initiation of inhibit areas. (x) Integrated display with in-service digital maps. (xi) Display of inputs from EOFCS.
EOFCS System		
(o)	EOFCS Sys	<ul style="list-style-type: none"> (i) Electro optical Day and Night sight. (ii) Should have optical zoom system. (iii) Range – not less than 8 Km for identification of flying object. (iv) <u>Field of view</u> <ul style="list-style-type: none"> (aa) Wide mode ≥ 24 deg x 18 deg ($\pm 5\%$) (aa) Narrow mode ≥ 1.5deg x 1deg ($\pm 5\%$)

S No	Parameter	Requirement
Missile System In case of a multi vehicle configuration, the missiles with additional sight to be on an alternate platform. Gun and Radar to be on one platform.		
(p)	Guidance	IR Homing (IIR Focal Plan Array) or Laser Beam Riding.
(q)	Range	(i) Effective range - not less than 6500 m. (ii) Minimum Range- not more than 500 m.
(r)	Altitude	Not less than 3000 M (AOL).
(s)	Target Speed	(i) Approacher- 500 m/s. (ii) Receder - 400 m/s.
(t)	Fuze	Impact and Radio/Laser proximity Fuze.
(u)	Numbers of missiles on mount	Not more than Six in ready to launch mode.
(v)	Electronic counter measures	Should have mechanism to counter Jamming or IR counter measure of hostile aerial target.
(w)	War Head	Multiple projectile/ fragmentation to cause max damage on detonation.
(x)	Self-Destruction	In case the missile misses target the Self destruction should happen within 15 sec of launch.
(y)	SSKP	(i) Not less than 70% for engagement by a single missile. (ii) Not less than 90% for engagement by two missiles in Salvo mode.
(z)	Reaction Time	≤ 3 Seconds (from issue of launch command to launch of missile).
(aa)	Emergency launch	Provision for launching all missiles from combat vehicle in case of emergency.
Gun System In case of a multi vehicle configuration, the missiles with additional sight to be on an alternate platform. Gun and Radar to be on one platform.		
(ab)	Caliber	≥30mm.
(ac)	No of Barrels	Single (35mm calibre or more)/Multi Barrel (if calibre 30mm to less than 35mm).
(ad)	Effective Range	Greater than 3500 m.
(ae)	Effective Altitude	Not less than 2500 m.
(af)	Angular Travel	Azimuth - 360 deg. Elevation - Minus 5 deg to 90 deg.

S No	Parameter	Requirement
(ag)	Cyclic Rate of fire	(i) Single Barrel (35mm or more calibre) - Not less than 300 rounds per min per gun for firing of programmable proximity fuze ammunition. (ii) Multiple Barrel (< 35 mm calibre) - \geq 600 rounds per min per gun for firing proximity fuze ammunition.
(ah)	Operation of Gun	Radar /EOFCS controlled Gun. The drive mechanism to have provisions of electrical/hydraulic drive and manual movement.
(aj)	Ammunition	The gun should be capable of firing Programmable Proximity Fuze/proximity fuze/HE Amn.
(ak)	Ammunition Stowage	There should be facility for stowage of ammunition in ready to fire condition (Belted/Clips) connected to the Gun for immediate engagement of air targets for at least Fifty Engagements.
(ao)	Firefighting system	The equipment should have automatic fire fighting system with sensors in critical areas. The fire warning and automatic suppression should be initiated to prevent damage to equipment and crew.
(ap)	NBC filtering System	The equipment should have adequate sealing, NBC indicators and NBC filters to operate in a contaminated area for at least 8 hours.
(aq)	Spectrum Management	The system should be in compliance with the Spectrum Management Policy of Government of India.

Maintainability & Ergonomic Parameters

6. The ADGM system (SP) must fulfil the following maintainability and ergonomic parameters/capabilities: -

S No	Parameter	Requirement
(a)	Shelf Life	(i) The service life of equipment should not be less than 20 years. (ii) The missiles should have a shelf life of more than 15 years and extendable upto 25 years as per the normal storage condition of Indian climatic condition. The test equipment for missile must be portable, function in Field condition (where no elaborate test and repair facilities are available) across all types of terrain in country and be capable of being mounted on vehicles and in testing room configuration. The test equipment should have feature of displaying test parameters/ result and facility to generate test report in printable format. (iii) However, min 15 years of shelf life if under operational exposure/field condition for prolonged periods (6 months continuous exposure).

S No	Parameter	Requirement
(b)	Packing Material & Water Proofing	The storage and shipping container for missiles and ammunition must be waterproof when exposed to tropical rain.
(c)	Environmental Control	An environmental control system for operation in extreme climate condition of both Hot and cold climate (AC & Heater) should be fitted in the crew compartment to maintain manual efficiency in harsh climate over sustained period.

7. **Design & Maintainability Concept.** Eqpt should be easy to maintain by replacement and repair of replaceable PCB/modules. Eqpt should be modular in construction to facilitate easy accessibility and speedy repairs by replacement of PCB/Modules in Field conditions. Eqpt should have extensive BITE to support diagnostics and repair in Fd conditions. Audio/Visual alarm be provided for fault indication/test failure/system malfunction upto PCB/module level. The software installed in the system should be restorable in field alongwith provision of upgradation. The IPR of the software indigenised by the Vendor should be provided as part of the deliverable. Adequate memory should be available to accept any upgradation in the future.

8. **Preventive Maintenance.** Post warranty, engineering/ maintenance support for the equipment will be provided by in-house maintenance agency. For this, the OEM should plan and develop suitable engineering support package comprising of spares, assemblies or sub-assemblies, Special Maintenance Tools, Special Test Equipment, Test Jigs & Fixtures, Technical Literature (as per **JSS-0251**) and Training Aggregates upto Base Level repairs. Suitable procedure and periodicity of checks and preventive maint tasks be laid out by OEM. These tasks should be within capability of user/maintaining Fd Wksp.

9. Transport Instruction, handling instruction, storage instruction be laid out by OEM clearly.

VENDOR INFORMATION PROFORMA

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

(Company profile including Share Holding pattern, 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: _____
Email: _____

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

Name & Address: _____
Pin code: _____ Tel: _____ Fax: _____
Email: _____

5. **Financial Details.** Category of Industry (Large/Medium/Small Scale): _____

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

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

7. **Details of Registration.**

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

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

Name of Organisation

Membership Number

9. **Equipment/Product Profile (to be Submitted for Each Product Separately)**

- (a) Name of Product: _____
(IDDM Capability be indicated against the product)
(Should be given category wise for e.g. all products under night vision devices to be mentioned together)
- (b) Description (attach technical literature):
- (c) Whether OEM or Integrator:
- (d) Name and address of Foreign collaborator (if any):
- (e) Industrial License Number:
- (f) Indigenous component of the product (in percentage):
- (g) Status (in service/design & development stage):
- (h) Production capacity per annum:
- (j) Countries/ Agencies where equipment supplied earlier (give details of qty supplied): _____
- (k) Estimated price of the equipment, including cost wise breakup of components:

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 at the earliest.

(Authorised Signatory)

**QUESTIONNAIRE FOR DESIGN & DEVELOPMENT OF
AIR DEFENCE GUN MISSILE SYSTEM (SELF PROPELLED) {AD GM SYSTEM (SP)}**

1. **Company Details.**

- (a) The category of the company, whether large/medium/small or Start Up.
- (b) Years of existence (Established in Year).
- (c) Annual turnover of the company.
- (d) Annual profit in the last three financial years.
- (e) Whether the company is OEM, manufacturing agency or system integrator.
- (f) Experience of the company in related fields.
- (g) Whether similar equipment has been supplied to any other government agency (type of equipment, quantity and cost).
- (h) Whether company has patents/IPR of any critical components/ sub-systems being utilized in the system.
- (j) Whether the company has any tie-ups/joint ventures with any foreign firm for producing similar equipment.
- (k) The credit rating of the company and net worth.
- (l) The shareholding pattern of the company.

2. **Infrastructure.**

- (a) Does the company have adequate infrastructure to develop, integrate and manufacture the system? If not, what would be the procedure and timelines to establish the same?
- (b) Does the company have adequate infrastructure for carrying out trials and testing of system/equipment being developed?
- (c) Know how and infrastructure in/for system integration.

3. **R&D.**

- (a) Infrastructure and number of employees working in R&D of systems related to the product.
- (b) Availability of Design modeling and simulation models/technologies.

4. **Buy (Indian-IDDM), Buy (Indian) and Buy & Make (Indian) Capability.** Can your entity indigenously design, develop & manufacture Air Defence Gun Missile System (Self Propelled) {ADGM System (Sp)} as per technical parameters for procurement under **Buy (Indian-IDDM)** or **Buy (Indian)** or **Buy & Make (Indian)** category of DAP 2020?

5. **Indigenous Content (IC).**

- (a) Likely achievable indigenous content at prototype as well as production stage.
- (b) Details of IC content in important sub systems and enabling technologies of Air Defence Gun Missile System (Self Propelled) {ADGM System (Sp)}.
- (c) Critical technologies identified for the system and details of critical technologies not likely to be available in India, to be sourced ex-import (**in cost percentage terms**).
- (d) Sub-systems/equipment manufactured by the company and details of outsourced equipment along with details of the manufacturer.
- (e) Details of Intellectual Property Rights (IPR) held.

6. **Estimated Time Period for Development.** Please list out the details of estimated timelines proposed by your entity (Company/Firm/Consortium/JV) in each of following aspects (**a detailed response will facilitate a realistic assessment**):-

- (a) Likely time for development of the prototype (in weeks).
- (b) Manufacturing of the product (per year capability).

7. **Explosive Licenses.**

- (a) Details of explosive license for munition manufacturing companies to be provided.
- (b) Capability and capacity (including tie up/MoU with established industry players) of handling explosives/propellants and related materials.
- (c) Know how in Armament/explosive handling/technologies (including tieup/MoU with established industry players).

8. **Broad Details/Technical Specifications of Existing Products/Under Development or Capable of Being Manufactured.** The proposed system details required are given at **Appendix A of RFI.**

9. **Operational and Logistic Parameters.**

- (a) What type of vehicle (tracked/wheeled) is being considered for the system?
- (b) Will it be a single or multi vehicle solution?
- (c) What is the form factor being considered for the system?
- (d) What will be the 'Power to Weight Ratio' with full combat weight in each vehicle?
- (e) What is the total weight of the system (less vehicle)?
- (f) What will be the arrangement/distribution of sub systems in case of multi vehicle configuration?
- (g) What are the logistics requirements of the system?
- (h) Number of persons required to operate the system.

10. **Product Support.**

- (a) The ability of the company to sustain the product through the lifecycle of the equipment (20 years) (including spares and upgrades).
- (b) How will you ensure continuous supply of spares especially for components procured ex-import?
- (c) How will continuous supply of spares be ensured from sub-contractors?
- (d) What measures would be taken to mitigate the effects of extreme cold climate on the equipment.
- (e) Recommended requirement of ESP/SMTs/STEs, jigs and fixtures for lifetime sustenance of eqpt.
- (f) How will I, O and D level repairs be undertaken (ref Appx F of schedule I of chapter II of DAP 2020)?
- (g) Warranty period of the product.
- (h) Willingness to establish 'I' & 'D' level repair facilities in various theatres for complex system (A Vehicles, Guns and other main sub systems).
- (j) Is the software being utilized in the system indigenous?

11. **Other Aspects.**

- (a) Capability of Air Defence Gun Missile System (Self Propelled) {ADGM System (Sp)} to operate along with mechanized/field formations in the Indian Army.
- (b) Capability and characteristics of the Power Supply system? How is power management being undertaken in the system? Is a power tap off from vehicle being provided?
- (c) The capability of the system to meet the Electronic Spectrum Management Policy of Government of India.
- (d) **Training of Crews.** What all simulators/other training aggregates for the proposed product be supplied by your entity?
- (e) The capability of the system to be Artificial Intelligence (AI) enabled/compatible (as applicable).

12. **Quality Certification.**

- (a) Details regarding quality certification like ISO 9000, JSG 0824:2022 (CQAG) etc, if so, details of date of certification with validity and certification agency.
- (b) Measures and capability to meet environmental specification as per laid down norms.
- (c) Capability of the system in conforming to the existing EMI/EMC policy as per Mil Standard 461 (as applicable).

13. **Cost.**

- (a) Cost of the prototype and the product (unit cost and total cost).
- (b) Minimum quantity economically viable for business.
- (c) Quantity of prototype recommended for user trials.
- (d) Likely life cycle cost of the system.
- (e) Breakdown of material, labour and software cost.
- (f) Cost for maintenance/product support.

14. **Delivery.** Tentative delivery schedule for supply of the equipment (with quantity) after conclusion of contract.

15. **Miscellaneous.**

- (a) Any additional capabilities of the system.
- (b) Any other related projects undertaken by your company/entity.
- (c) Any other know how held.
- (d) Acceptability to the terms of payment as per DAP 2020.
- (e) Willingness to honour the codification clause as per DAP 2020.
- (f) All inputs of individual system parameters should facilitate formulation of a trial methodology. What individual subsystems will be recommended for vendor certification, certification by accredited labs and trials by simulation?

**GUIDELINES FOR FRAMING CRITERIA FOR VENDOR SELECTION/
PREQUALIFICATION IN 'BUY (INDIAN-IDDMM)', 'BUY (INDIAN)' AND
'BUY & MAKE (INDIAN)' CASES**

1. The guidelines prescribed for short-listing/ pre-qualification of Indian vendors in Buy (Indian-IDDMM), Buy (Indian) and Buy & Make (Indian) cases are enumerated in the succeeding paragraphs. Paragraph 2 deals with the parameters that may be considered for short-listing of vendors, whereas Paragraph 3 amplifies the process for applying selected parameters to the process of Vendor Short listing.

2. **Parameters.**

(a) **General Parameters.**

(i) Applicant Entity should be an Indian Vendor as defined at Paragraph 20 of Chapter I of DAP 2020.

(ii) Business dealing with applicant Entity or any of its allied entities should not have been suspended or banned, by MoD/ SHQ or any Government Department or organization (as defined in Guidelines for Penalties in Business Dealings with Entities issued vide Ministry of Defence, D(Vigilance) MoD ID No 31013/I/2006-D(Vig) Vol II dated 21 Nov 2016). None of the Promoters and Directors of applicant entity should be a willful defaulter.

(iii) "Entities" will include companies, with whom the Ministry of Defence has entered into, or intends to enter into, or could enter into contracts or agreements.

(iv) "Applicant entity" may be a company, subsidiary, an associate company (as defined in the Companies Act, 2013), a consortium or a Joint Venture (JV).

(b) **Technical Parameters.**

(i) Vendor shall be a manufacturing entity or a system integrator of defence equipment and not a trading company, except in cases where the OEM participates only through its authorised Vendors.

(ii) Minimum **two years** experience in **broad areas like manufacturing/ electronics/ explosives etc. as applicable in the instant procurement case**. If not, then cumulative experience of **at least three years in above areas**, resulting in gaining of competence for manufacturing the proposed product. (In case the SHQ feels that for a particular equipment a lesser experience could be accepted, then the same should be got approved by the competent authority before including the same in the RFP).

(iii) Where product involves integration, previous experience **of not less than one year/ one project** in integration of systems/ equipment shall be required.

(iv) **Turnkey Projects.** Experience of successful completion of one Turnkey project of similar nature within last five years with value of at least 20% of AoN cost or currently executing a contract of similar nature with value of at least 30% of the AoN cost. In case of no experience in Turnkey projects, the vendor for main component of the Turnkey project may be selected if it has experience as per paragraph 2 (b) (ii) above and experience of installation or integration of similar equipment/system or system of systems.

(v) **ICT Cases.**

(aa) Certification to be included if linked to scope of work - Gartner Quadrant/ISO9001/CMMi3 or more (specifying development/service/acquisition models)/ISO27001. For Information Security and large value projects preferably CMMi5 may be specified.

(ab) Compliance with IEEE/ ITU standards depending upon nature/type of project or solution required.

(c) **Financial Parameters.**

(i) **Average Annual Turnover.** Minimum average annual turnover for last three financial years, ending 31st March of the previous financial year, should not be less than 30% of estimated cost of the Buy (Indian-IDDM), Buy (Indian) and Buy & Make (Indian) project.

(ii) **Net Worth.** Net worth of entities, ending 31st March of the previous financial year, should not be less than 5% of the estimated cost of the Buy (Indian-IDDM), Buy (Indian) and Buy & Make (Indian) project. For orders above ₹ 5000 crores, the Networth of group companies can be considered on production of suitable documentary assurance.

(iii) **Insolvency.** The entity should not be under insolvency resolution as per Indian Bankruptcy Code at any stage of procurement process from the issuing of RFP to the signing of contract.

(iv) **Credit Rating (Desirable Financial Parameter).** Long term credit rating equivalent to CRISIL rating on Corporate Credit Scale as CCR-BBB or better, and SME-04 or better for SMEs issued by credit rating agencies recognized by SEBI. Credit rating should be as on 31st March of the previous financial year.

(Note 1: All the above Financial Parameters, except Paragraph 2(c)(iii) above (Insolvency) will not be applicable for Capital Acquisition cases where estimated cost is ₹ 150 crores and below. However, Net worth of entities should not be negative.

(Note 2: The turnover and net worth of the vendor shall be rounded off to the nearest lower ten/ hundred crores so as to keep the estimated cost of procurement confidential).

(d) **Other Parameters.**

(i) **Industrial License (IL).** Vendors should be either holding a valid defence industrial license or should have applied for the same before responding to RFP. In any case the vendor must confirm holding of IL before commencement of FET. (Items requiring IL will be as per DIPP Press Note 3 of 2014 as amended from time to time).

(ii) **Registration.** Registered for a minimum of two years (one year for SMEs). Minimum number of years not applicable for JVs constituted specifically for a project.

3. Stipulations for Applying Parameters.

(a) **Areas like manufacturing/ electronics/ explosives etc.** referred to at Paragraph 2(b)(ii) should be defined in each case of procurement.

(b) In case the Applicant Entity is unable to meet the Financial Parameters by itself, it may rely on its **Holding Company** (as defined in the Companies Act, 2013 and amendments thereof) ("Companies Act") for fulfilment of the Financial Parameters, in which case reliance must be placed on the Holding Company towards fulfilment of **ALL** the Financial Parameters.

(c) In case the Applicant Entity is unable to meet one or more of the Technical Parameters by itself, it may rely on a Group Company(ies) for fulfilment of the Technical Parameters. A Group Company in relation to the Applicant Entity may be:-

(i) A company of which the Applicant Entity it is an Associate Company. Such company should have ownership, directly or indirectly, of at least 26% of the voting shares of the Applicant Entity.

(ii) A company which is an Associate Company of the Applicant Entity. The Applicant Entity should have ownership directly or indirectly, of at least 26% of the voting shares of such Associate Company.

(iii) A Company with whom the Applicant Entity is commonly owned, directly or indirectly, for at least **26%** of the voting shares by another company. For example: An Applicant Company A is an Associate Company of Company B, in which B holds at least 26%. Further, C is also an Associate Company of B, in which B holds at least 26%. In this case the Applicant Company may use the credentials of C as well.

(iv) The Holding Company and Subsidiary Companies (as defined under the Companies Act) of the Applicant Entity.

(d) The Applicant entity may be a single entity or a group of entities (the "Consortium"), coming together to implement the project. In such case:-

(i) The credentials of only those members or their related entities may be counted, who have at least 26% equity stake in the Consortium.

(ii) Each Consortium should have a designated **Lead Member**.

(iii) For Technical Parameters, **any of the Consortium members or their Group Companies** may meet the criteria.

(iv) For Financial Parameters; the Turnover and Net Worth of the Consortium Member shall be reckoned **proportionate to Consortium Member's equity stake** in the Consortium, and each Consortium member should meet the other criteria pertaining to Insolvency and Credit Rating. In case the Consortium Member relies on its Holding Company for any one of the above-mentioned Financial Parameters, then reliance must be placed on the Holding Company for meeting **all the financial Parameters**.

(e) Vendors should provide all necessary self-authenticated documentation in support of their achievement of criteria. Such documentation should inter-alia include:-

- (i) Details of projects/ supply orders successfully executed in the last two years.
- (ii) Annual reports for three years of applicant entity, parent and associate companies, consortium and JV partners.
- (iii) Details of shareholders, promoters, associated, allied and JV companies.
- (iv) Details of vigilance action, viz. ongoing investigation and suspension/ debarment/ blacklisting actions against the applicant entity or any of its allied entities, parent company or consortium and JV partners, if any by any Department/agency of Central Government.
- (v) A certificate from CA/CS indicating the financial parameters for the last three years as per Paragraph 2(c).

(Note: If a vendor is already a supplier to MoD and/ or has already provided the above documents in such cases, it should be necessary for the vendor to resubmit only such documentations as is necessary to update the above).

(f) Any vendor furnishing false information will be liable for action as per existing guidelines.

(g) Based on these generic parameters, more specific criteria should be evolved by the SHQ with regard to Technical and Financial parameters {Paras 2(b) and 2(c) above} in each procurement case depending upon requirements peculiar to each case keeping in view the overall need to ensure wider vendor participation. The specific criteria evolved by the SHQ for each case, as per these guidelines, may be got approved by the competent authority before including the same in the RFPs.

4. **Start Ups/ MSMEs.** Start ups would be defined as per G.S.R. 127 (E) dated 19 Feb 2019 (as amended from time to time). For procurement cases where the estimated cost is not exceeding ₹100 crores/ year based on delivery schedule at the time of seeking AoN or ₹150 crores, whichever is higher, to encourage the Start Ups/ MSMEs and build Industrial ecosystem, the recognized Start Ups/ MSMEs in the relevant fields may be considered for issue of RFP without any stipulation of Financial parameters, except Paragraph 2(c)(iii) above (Insolvency) and with General and Technical parameters to be decided on case to case basis.

(Note: Start Ups should not be confused with New entrants who may be high/ mid-sized groups having financial support and manufacturing experiences and now venturing into Defence Production).

5. The criteria for vendor selection shall be clearly stipulated in RFPs so as to maintain transparency. Care shall be taken to ensure that the stipulated criteria are not open to subjectivity and arbitrary interpretation.