

**DRAFT**

**REQUEST FOR INFORMATION (RFI) : 155MM / 52 CALIBRE**

**MOUNTED GUN SYSTEM**

1. Indian Army is planning to procure 155mm / 52 Calibre Mounted Gun Systems (Gun System mounted on a vehicle chassis). It is proposed to identify probable Indian vendors who can undertake the above project. Indian vendors are requested to forward information / compliance in the form of a Questionnaire attached as per Appendix A to the RFI. In addition, the Indian vendors are also requested to furnish details as per Information Performa attached as per Appendix B to the RFI.

2. The requested information / details may please be forwarded to the following address by 01 September 2013:-

- (a) Directorate General of Artillery (Arty-5),  
General Staff Branch,  
Room No 507, A-Wing, Sena Bhawan,  
Integrated HQ MoD (Army),  
DHQ PO New Delhi 110011,  
Fax / Tele No : 01123333609,  
Email : artydte-mod@nic.in
- (b) Directorate General of Weapons and Equipment (WE-9),  
General Staff Branch,  
Room No 216, South Block,  
Integrated HQ MoD (Army),  
DHQ PO New Delhi -110011,  
Fax No : 01123793274,  
Email : we\_dte@yahoo.com
- (c) Directorate General of Weapons and Equipment (RFP Cell),  
General Staff Branch,  
Room No 444, A Wing, Sena Bhawan,  
Integrated HQ MoD (Army),  
DHQ PO New Delhi -110011,  
Fax No : 01123793274

- (d) Directorate General of Perspective Planning (GSQR & Cat Cell),  
General Staff Branch,  
Room No 115, A Wing, Sena Bhawan,  
Integrated HQ MoD (Army),  
DHQ PO New Delhi -110011,  
Fax No : 01123011198
  - (e) Technical Manager (Land Systems),  
Room No 28, D-II Wing, Sena Bhawan,  
Integrated HQ of MoD, New Delhi – 110011,  
Fax No : 01123792414
3. Vendors may also submit response by E mail ID to [artydte-mod@nic.in](mailto:artydte-mod@nic.in)

## **QUESTIONNAIRE**

### **Physical Parameters**

1. **Dimensions.**

- (a) What is the length, width and height of the equipment in meters?.
- (b) What is the ground clearance of the vehicle in meters?
- (c) What is the weight of the equipment in tonnes?

2. **Details of Ordnance.**

- (a) What is the length of barrel in meters?
- (b) What is the equivalent Full Charge (EFC) value of the barrel?
- (c) Please specify the chamber capacity of the barrel.

3. **Crew.**

- (a) How many personnel are required as crew (including the commander and driver) to operate the equipment?
- (b) Can the vehicle cabin accommodate the crew?
- (c) What are the arrangements to provide protection to the crew from splinters?
- (d) Does the driver and crew cabin cater for environment control? Also please specify inside temperature maintained in the cabin.

4. **Vehicle Characteristics.**

- (a) What fuel is used by the vehicle?
- (b) What is the maximum speed of the vehicle on metalled roads and on semi desert tracks?
- (c) What is the capacity of fuel tank in litres?
- (d) What is the cruising range of the vehicle on a full tank of fuel on a metalled road and cross country?
- (e) What is the maximum gradient negotiable by the vehicle?
- (f) What are the emission norms to which the vehicle is compliant?

- (g) What is the depth of water body which can be crossed / negotiated by the vehicle without any additional preparation or equipment?
- (h) What is the on board ammunition carrying capacity in terms of :-
  - (i) Fully prepared shells.
  - (ii) Charge bags.
- (j) Please confirm availability of central tyre inflation and pressure regulation system in the vehicle.

### **Operational Parameters**

#### 5. **Arc of Fire.**

- (a) What are the traverse limits at all angles of elevation?
- (b) What is the maximum and minimum elevation for the proposed gun system?

#### 6. **Ammunition System in Use.** Give out the details of ammunition system in use under the following heads:-

- (a) Projectiles.
- (b) Fuzes.
- (c) Charges.

#### 7. **Compatibility with Indigenous Ammunition.** Is the gun system compatible with current types of ammunition used by the Indian Army?

#### 8. **Range : Indirect Fire.**

- (a) What is the maximum range with standard high explosive (HE) ammunition?
- (b) What is the maximum range with assisted (Base Bleed) ammunition?
- (c) What is the minimum range achievable in high angle with standard HE ammunition?
- (d) What is the maximum range for direct fire / anti tank fire?

#### 9. **Endurance and Rate of Fire at 80 Per Cent of Maximum Range at Low Angle.**

- (a) What is the intense rate of fire of the gun system? What is the maximum duration for which it can fire at intense rate?
- (b) What is the burst rate of fire of the gun system?
- (c) What is its sustained rate of fire for 60 minutes with highest charge?

10. **Accuracy and Consistency in Low Angle at 80 Per Cent of Maximum Range for Standard HE Ammunition and HE Base Bleed Ammunition in Low Angle.**

- (a) What is the consistency of the equipment in terms of the following:-
  - (i) Range.
  - (ii) Line.
- (b) What is the accuracy of the equipment in terms of the following:-
  - (i) Range.
  - (ii) Line.

11. **Sighting System.**

- (a) Is the sighting system based on GPS supported Inertial Navigation System?
- (b) What is the accuracy of fixation of the gun?
- (c) What is the accuracy of aiming for the following:-
  - (i) Azimuth (in mils).
  - (ii) Elevation (in mils).
- (d) **Optical Sight for Indirect Fire.**
  - (i) Does the equipment have an optical sight with recordable collimator as a back-up for indirect fire?
  - (ii) What is the accuracy of the optical sight?
- (e) **Night Sight.**
  - (i) At what ranges can the night sight identify a tank sized target?
  - (ii) What is the maximum and minimum range of Laser Range Finder (LRF)?

12. **Fire Control System (FCS).**

- (a) Is the FCS capable of receiving the gun data from the Command Post in digital as well as manual feed by the gun crew?
- (b) Is the FCS capable of laying the gun automatically, after input of command from the crew, at the desired bearing and elevation?
- (c) Can the FCS be integrated with indigenously produced Auto Fire Control System?

13. **Muzzle Velocity Radar (MVR).**
- (a) Is the equipment equipped with MVR?
  - (b) Would the MVR automatically compute the shells initial MV?
  - (c) Would the MVR provide digital update of the MV on as required basis?
14. **Automatic Functions.** Would the loading and ramming functions be automatic?
15. **Power Source.** What is the source of power for automatic functions? Please provide details of Auxiliary Power Unit (APU).
16. **Backup Arrangements.** Would the equipment have alternate back-up arrangements for enabling automatic functions including laying as well as to bring the MGS into and out of action?
17. **Recoil System.** What is the type of recoil system in the equipment?
18. **Obturation System.** What type of obturation system is in use with the equipment?
19. **Communication System.**
- (a) What are the arrangements for inter-communication within the gun crew?
  - (b) What are the arrangements for Detachment Commander to communicate with the Command Post within range of minimum one kilometre?
20. **Environmental Performance.** What is the temperature range in which the gun system will function efficiently?
21. **Transportability.** Is the MGS transportable by rail, sea and air?

### **Operation and Maintenance**

22. **Time Into / Out of Action.** What are the time limits for the equipment to come into and out of action both for day and by night?
23. **Safety Arrangements.** What are the safety arrangements on the equipment to ensure the following:-
- (a) The gun does not fire till breech block is closed?
  - (b) The gun does not fire till fully run out?
24. **Warning Arrangements.** What warning arrangements are incorporated to ensure safe operation and maintenance of the gun?

25. **Onboard Test Equipment.** Give out the details of following:-
- (a) On line test facilities.
  - (b) Off line test facilities.
  - (c) Hardware test facilities.

**Miscellaneous Details**

26. **Status of Development / Production.**
- (a) What is the present status of development of the gun system?
  - (b) Please specify timelines for fielding the product for evaluation.
  - (c) What is the infrastructure available to produce the MGS in India?
  - (d) What is / will be the annual production capability of your firm?
27. **Indicative Cost.** What is the rough indicative cost of one MGS?
28. **Details of Joint Venture (JV) Partners.** Please specify details of foreign firm(s) as JV partner(s).
29. **Standardisation.** Please confirm that the assemblies sub-assemblies, components, parts and materials used in the equipment conforms to relevant MILSTD(S) and in the absence of MILSTD(S), other internationally accepted standards.

**INFORMATION PERFORMA**1. **Name of Vendor/Company/Firm.**


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(Company profile, in brief, to be attached)

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

- (a) Original Equipment Manufacturer (OEM): Yes/No
- (b) Government Sponsored Export Agency : Yes/No (Details of registration to be provided)
- (c) Authorised Representatives of OEM : Yes/No (Attach Details)
- (d) Other (give specific details).

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3. **Contact Details.**

Postal Address \_\_\_\_\_

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

PIN Code \_\_\_\_\_ Tele \_\_\_\_\_

Fax \_\_\_\_\_

URL/Website \_\_\_\_\_



4. **Local Branch/Liaison Office/Authorised Representative, in Delhi (if any).**Name & Address \_\_\_\_\_  
\_\_\_\_\_

PIN Code \_\_\_\_\_ Tele \_\_\_\_\_

Fax \_\_\_\_\_

5. **Financial Details.**

(a) Annual turnover \_\_\_\_\_ INR.

(b) Earlier contracts with Indian Ministry of Defence/Government agencies.

S No	Agency	Contact Number	Equipment	Quantity	Cost

(c) Details of manufacturing infrastructure available :

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

S No	Name of Agency	Certificate	Applicable from (Date & Year)	Valid Till (Date & Year)

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

(a) Name of Product \_\_\_\_\_

(Should be given category wise for eg all products under Night Vision Devices to be mentioned together).

(b) Description (attach technical literature).

(c) Whether OEM or Integrator.

(d) Status (in service/design development stage) \_\_\_\_\_

(e) Production capacity per annum \_\_\_\_\_

(f) Countries where equipment is in service \_\_\_\_\_

(g) Whether export clearance is required from respective government (Foreign vendors only) \_\_\_\_\_

(h) In case of equipment and ammunition, JB MOU compliance to be specified.

(j) Details of any collaboration/joint venture/co production/ authorized dealer with Foreign Industry.

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

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

8. (a) Are you making the full equipment or it is being integrated by you ? Please provide details.

(b) What are the components, sub system or sub assemblies of the equipment which are not manufactured by you? Please give details.

9. Details of participation in similar procurement cases in India / foreign countries in the past.

10. **Any other Relevant Information.**

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