

**QUESTIONNAIRE ON MAKE PROJECT NO. IAF/11/16-17**  
**DESIGN AND DEVELOPMENT OF 125 KG BOMB**  
**(AKIN TO MK-81 BOMB)**

**General Aspects**

1. Whether the company/Association of Persons (AoP) is eligible as per provisions of DPP 2016? (Eligibility of Participation: Indian vendors only).
2. Whether the vendor can provide an assessment of its capability (Financial and Technical)? If so provide the necessary documentation for verification.
3. Is the firm registered by Government agency? Has the firm been authorized by Govt agency for manufacture/ supply of the explosives?
4. What will be annual turn-over/ production capability of the store by the firm?
5. Is the firm design and development agency and OEM and supplier or only a supplier?
6. What all components will be manufactured by the firm and what will be outsourced?
7. Specify details of manufacturing infra-structure.
8. Does the firm have refurbishment facility?
9. Whether 40% Indigenous Composition (IC) can be ensured?
10. Does the vendor envisage the feasibility of achieving future exports?
11. Whether the vendor's proposal would be eligible for Make-I or Make-II subcategory of Chapter III of DPP 2016?
12. Whether R&D or ToT through foreign collaboration is proposed by the vendor?
13. Estimated cost of development in case indigenous R&D is proposed.
14. Estimated tentative time period of completion of R&D or ToT.
15. Rough Order of Magnitude (ROM) Cost of 125 kg bomb manufactured in India as follows:-
  - (a) Cost of 2000 bombs.
  - (b) Cost of 5000 bombs.
  - (c) Cost of 10,000 bombs and so on.

## **Technical Aspects**

16. Define type of warhead viz. Penetration cum Blast (PCB), Penetration, Monolithic, Sub-munition type etc.
17. Define the lethality of the store in appropriate terms viz. define lethality of the store in terms of Distance Vs. Perforation density in case of Pre-Fragmented warhead and Distance Vs. Max Peak over Pressure and Distance Vs. Penetration capability for Penetration cum Blast (PCB) Warhead.
18. Define the NEQ and TNT Equivalent of the store.
19. Define Max Range of Bomb as per Release altitude and Release speed.
20. What will be the shelf life of the store in terms of :-
  - (a) Calendar life for storage
  - (b) Flying hours, Number of take-off/ landings for operational deployment
21. Specify the transportation limit, if any, in case of transportation by rail, road, sea, air.
22. Specify the safety features for storage, transportation and deployment.
23. Specify the Environmental Conditions/ limits for
  - (a) Operation
  - (b) Storage
24. Specify the Weight, Dimension and Moment of Inertial along three axis for the bomb.
25. Define the lug specifications in terms of spacing, lug design (thread, depth etc). Specify whether the lugs will be compatible with Russian as well as NATO aircraft.
26. Specify the compatible bomb racks for the bomb.
27. Specify the compatible fuses for the store.
28. Is there provision of conduit for turbo-generator to make it compatible with contemporary fuses.
29. Specify the Material and manufacturing process for bomb casing.

30. Specify the EMI/EMC compatibility of the store.
31. Specify the Environmental testing and load testing, as per Mil-Spec, that the store will undergo to make it airworthy.
32. Specify the Mil-Specs that were followed for design, safety and certification requirements.
33. Specify the certification agency.
34. Specify whether training stores: inert and with reduced charge can be supplied.
35. Specify the NEQ for reduced charge bombs.

<b>Details of Project Officer</b>
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<b>Vendors' Response expected by: 31 May 17</b>