

RFP for Fabrication of Side covers for VELC Proto Flight Model

Complete fabrication, heat treatment, manufacture, inspection, supply of following “**VELC Proto Flight model (PFM) Side covers**” as per our enclosed drawings and technical specifications.

- A The primary scope of this RFP is that the vendor shall manufacture and deliver the Side covers for flight model made of Aluminum Alloy, AA6061 T6-51 as per the list/drawings/specification provided by IIA.
- B IIA would like to consider early delivery of above components without affecting the quality of work, as per the details given below.

Manufacturing drawings in 2D and step 3D models will be provided.

Vendor shall strictly follow/adhere to the standard and notes specified in the drawing.

- Raw Material (Aluminum Alloy, AA6061 T6-51) shall be subjected to Ultrasound test before the commencement of work.
- Component shall be subjected to dye penetration test after the Final Machining.
- Helicoil shall be inserted after Surface Coating & Cleaning done by IIA
- Test Reports including Raw material (Mechanical/Chemical properties) shall be provided.

1. The vendor shall provide the details of the overall process steps / plans proposed to realize the part prior to the commencement of the work. Overall plan for executing the work order shall be submitted by the vendor providing visibility of all matters relating to the phases of the activity specified in the drawing.

2. The fabrication/manufacturing drawings prepared by the vendor shall be given to IIA for approval before proceeding with manufacture.

3. The vendor should identify the milestones for completing the entire job and should send a list of it with time schedule along with the bid.

4. The vendor shall maintain complete files of all documents relating to product assurance, such as inspection process and nonconformance and reworks etc.

5. Stage and final inspection of the components is essential.

6. The vendor should have proper facilities including the CMM to inspect/measure the geometrical tolerances and dimensional tolerances.

7. The Vendor shall obtain clearance from IIA for out sourcing any component or any process pertaining to manufacturing process of the tendered parts in advance.

8. IIA shall have the right, to perform inspection of the components at various stages either at vendor's/sub vendor's sites. The vendor shall rectify at their expense any deviations from the specifications/drawings.

9. All dimensions of the components to be as per the drawings supplied by IIA. Any deviations/nonconformance at any steps of manufacture should be reported to IIA and a clearance to be obtained for further action.

10. All dimensions to be measured at a temperature of 20°C (+/-1.0°C) as specified by IIA.

11. Vendor shall accommodate any small/minor changes in the requirement if arises after placement of PO without any extra claims.

12. IIA shall issue serial numbers for various components. The vendor shall mark them at appropriate locations given in the drawings (for identification and traceability). These numbers shall not be changed when any part is reworked etc. unless it is approved by IIA.

13. The inspection will be done in the following stages, to ensure that the machining of the components is progressing as per the specs. The following are the different stages,

- a) Primary stage: Needed on raw material dimensions, hardness of the material, etc.
- b) Intermediate stage: Inspection and metrology of pre-machined parts including the heat treatment process.
- c) Final stage: Inspection and metrology of final machined parts, hardness tests and assembly checks of all critical parts.

14. Final inspection/ acceptance test will be carried out at the vendors place. Vendor shall assemble and demonstrate the performance of the unit in terms of geometrical alignment like collinearity, coplanarity, perpendicularity etc. as per the drawing.

15. Visual inspection to be done to ensure no scratches and burrs are present in the components.

16. Complete database and records of measurements and inspection of all stages of manufacturing and test reports should be maintained by the vendor and made available to IIA during delivery of the components.

Cleaning, packing and transport: All components after deburring to be cleaned (by petroleum based solvent) and degreased by ultrasonic cleaning before packing. Component shall be packed properly to ensure that no damages occur while transporting it to IIA.

List of Components to be fabricated: 15 parts

Sl. No.	Description
1.	Front Cover part A
2.	Front Cover Part B
3.	Back Cover Part A
4.	Back Cover Part B
5.	Back Cover Part C
6.	Side Cover R (+ Pitch)Part A
7.	Side Cover R (+ Pitch)Part B
8.	Side Cover L (- Pitch)Part A
9.	Side Cover L (- Pitch)Part B
10.	Top Cover F (- Yaw) Part A
11.	Top Cover F (+ Yaw) Part B
12.	Top Cover F (- Yaw) Part C
13.	Top Cover M (-Yaw)
14.	Top Cover B(+ Yaw) Part A
15.	Top Cover B (- Yaw) PartB

