



वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्  
Council of Scientific & Industrial Research  
राष्ट्रीय वांतरिक्ष प्रयोगशालाएं  
National Aerospace Laboratories

NAL/PUR/FMCD/239/22-Z

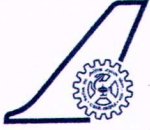
12-May-2023

**CORRIGENDUM**

In continuation to our tender No. NAL/PUR/FMCD/239/22-Z, (Tender ID: 2023\_CSIR\_151448\_1) uploaded on 12-May-2023, for “Design development assembly and installation of visual projection system”, please note the following changes in the pre-bid meeting:-


Sl. No.	Clause no, Pg in RFP	Current Description/requirement	Amendment of Tender Document
1.	Chapter -4, Page no 49, Point-6	Projectors-Three projectors shall be used to cover the above said FOV. The projectors shall be mounted above the cockpit shell without obstructing visibility from cockpit. The mounting of projectors shall not obstruct free movement of personnel / pilots from/to cockpit. As the room floor-ceiling height is 8 m, a self-supporting rigid gantry structure firmly grouted to ground to be designed and erected for mounting the projectors. There shall be an overlap of about 10% between two projectors. Vendor can decide on the suitable projector – lens configuration to suit the requirements Vendor shall supply one spare projector – lens combination (Total 4 Projectors-cum lens)	Projectors-Three projectors shall be used to cover the above said FOV. The projectors shall be mounted above the cockpit shell without obstructing visibility from cockpit. The mounting of projectors shall not obstruct free movement of personnel / pilots from/to cockpit. As the room floor-ceiling height is 8 m, a self-supporting rigid gantry structure firmly grouted to ground to be designed and erected for mounting the projectors. There shall be an overlap of about 10% between two projectors. Vendor can decide on the suitable projector – lens configuration to suit the requirements Vendor shall supply one spare projector – lens combination (Total 4 Projectors-cum lens)  Vendor shall clean filters of projectors every six months during the warranty period

  
14/5/23



2	Chapter -4, Page no 49, Point-7	Projector Type-Laser projectors with input resolution of atleast 1920 X 1200 pixels @ 60 Hz, WUXGA.	Projector Type-Laser projectors with input resolution of atleast 1920 X 1200 pixels @ 60 Hz, WUXGA.
3	Chapter -4, Page no 49, Point-8	Average Brightness-The projectors should be capable of emitting atleast 7000 lumens in normal mode operation.	As per our design, with covering around the screen and projectors, 7000 lumens is sufficient for pilot's view
4	Chapter -4, Page no 49, Point-1	Effective Field of view (FOV) wrt DEP	Using the requirements - FOV, empty space between nose tip and wall behind, projector type, visual acuity, vendor is free to choose the projector lens combination which satisfies above requirements
5	Chapter -4, Page no 50, Point-09	Soft Blending-Soft blending shall be applied on the blend zone to compensate for residual non-uniformity	Soft Blending-Soft blending shall be applied on the blend zone to compensate for residual non-uniformity. Vendor shall make markings on the screen every 10 deg for the FOV range
		Provide Floor to cockpit nose tip height	Floor to cockpit nose tip height dimension is 1160 mm
6	Chapter 4.2.2 (i)	Image Generators (IGs) will be provided by NAL. Each IG will have high end GPU with DP/DVI interface.	Image Generators (IGs) will be provided by NAL. Each IG will have high end GPU with DP/HDMI interface.

Kindly, note that all other terms and conditions of the tender shall remain the same.

  
Controller of Stores & Purchase  
For and on behalf of CSIR