



**Dr. Arvind Kumar**  
Assistant Professor

Enquiry no.: IITK/ME/AK/2016/02  
Enquiry open date: January 25<sup>th</sup>, 2016  
Tender due date: February 4<sup>th</sup>, 2016

## **Enquiry for Fused Deposition Machine**

We are interested to purchase a fused deposition machine for additive manufacturing. The main features of fused deposition machine are provided below:

### **Requirements:**

1. Build volume – should be as large as possible, 20 x 20 x 20 cm at least.
2. Extruder dia - should be small, ~ 0.4 mm. Options for multiple extruder dia will be preferred.
3. Layer thickness- 50-600 micron (minimum-maximum).
4. Print accuracy- as better as possible.
5. Heated bed - required.
6. Number of extrusion heads - at least 2.
7. Option of colored filament use would be preferred.
8. Material - ABS, PLA, Nylon, HIPS, PVA etc. More materials option would be preferred. We should be able to use third party supplied material, also. Material should not be too costly. Supply should be ensured by the equipment seller.
9. Support material - easily removable support material.
10. Power requirements - should work on standard supply voltage (220 V AC), should be more energy efficient (less power consumption is better).
11. Supported OS - WINDOWS 7, 8 at least.
12. Supported file formats - .stl at least, support for more format will be better.
13. Seller should provide a state-of-the-art computer required, along with equipment softwares, with the FDM machine. The software licensing should be perpetual and should not to be renewed.
14. Most importantly, the machine should be more research oriented. We must be able to change the parameters, design new parameters, can use more materials (3-4 different materials), develop some new materials, use third party materials, any complex shaped can be manufactured when the CAD data is there. And the software should have full open access to change the parameters of the equipment so that we can perform research activities.
15. The provision of some initial supply of different materials is desirable with the equipment itself.
16. Also include the price of each raw material (that the equipment can handle) as optional items.

## Terms and Conditions:

- ❖ Provide “Authorization certificate” from the manufacturer, in case the quotation is submitted by an Indian Agent.
- ❖ Prices should be FOB/ CIF up to IITK.
- ❖ Prices should include installation and training cost, and all additional charges including freight, insurance etc.
- ❖ Validity of quotation should be at least for 30 days.
- ❖ Warranty: Two Year or more from the date of Installation and Commissioning.
- ❖ The supplier should provide training for the use of the equipment.
- ❖ An undertaking that the vendor will supply all the spares and services for the equipment for at least 5 years from the date of commissioning.
- ❖ Availability of after sales service and support in India. Supplier has to compulsorily indicate details of facilities/expertise/qualification/cost (after warranty period) of support in India. Factory trained engineers should be available in India for complete product support.
- ❖ Discount: **maximum educational discount** to be provided.
- ❖ Normal payment terms for the Institute will be applicable (**90%** on delivery of the items and the remaining **10%** after satisfactory installation/ inspection).
- ❖ Delivery must be within 4-5 weeks. Earlier would be better.
- ❖ In case of any dispute, the decision of the Institute authority shall be final.

Kindly send your best offer (Technical and Commercial offers separately in two envelopes. The Financial Bid should include the detailed price quotation clearly including the cost of the equipment, taxes, service charges if any, shipping and handling charges) so as to reach us on or before February 4<sup>th</sup>, 2016 (by 3.00 PM) to the following address. Kindly mention "**Fused Deposition Machine: IITK/ME/AK/2016/02**" on the sealed envelope.

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In case of any queries/ clarifications related to this tender, you may contact Mr. Ashish Mishra (mob: 9554571009 or mail at [ashishkmishr@gmail.com](mailto:ashishkmishr@gmail.com) )