

 IIT PALAKKAD	भारतीय प्रौद्योगिकी संस्थान पालक्काड Indian Institute of Technology Palakkad अहलिआ एकीकृत कैम्पस, कोज़िहपारा Ahalia Integrated Campus, Kozhipara पालक्काड- 678557 Palakkad – 678 557	दूरभाषसंख्या/ Phone no: 04923 – 226300/590/586 ईमेल/ Email : purchase@iitpkd.ac.in
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Ref No: IITPKD/ELE/AA/ 099 /2017

Date: 12.01.2018

Due Date of the tender: 29.01.2018 @ 3 PM

TENDER FOR INVITING QUOTATIONS

Dear Sirs,

On Behalf of Indian Institute of Technology Palakkad quotations are invited for “**3D FDM/FFF printers**” confirming to the specification in the Annexure.

- Preparation of Bids:** - The tenders should be submitted **under two-bid system** (i.e.) Technical bid and Financial bid. The technical bid should consist of all technical details along with commercial terms and conditions. No prices should be included in technical bid. Financial Bid should indicate item – wise prices for the items mentioned in the technical bid. The technical and the financial bids should be put in separate cover and sealed. Both sealed covers should be put into a bigger cover.
- The Quotations duly sealed and superscribed on the envelope **with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above. Fax and Email quotation are not acceptable.**
- The price should be quoted per unit and packing and delivery charges should be indicated separately. The offer/bids should be exclusive of Taxes and Duties, which will be paid by the purchaser as applicable. However the percentage and of taxes and duties as on date should be clearly indicated.
- The Quotations should be valid for **sixty days** from the due date and the period of delivery required should also be clearly indicated.
- Local Firms:** Quotations should be for free delivery to this Institute. If Quotations for Ex-Godown delivery charges should be indicated separately.
- Outside Palakkad: Quotations should be for **F.O.R. at IIT Palakkad**. If F.O.R. consignor station, freight charges by passenger train / lorry transport must be indicated. If Ex-Godown, packing, forwarding and freight charges must be indicated.
- Goods shall not be supplied without an official supply order.
- Custom Duty:** Custom Duty which will be paid at a concessional rate against duty exemption certificate.

9. **Payment:** Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later. No advance payment will be made. The Tenderer have to furnish the bank details along with tender like Account No, Account Name, IFSC Code, Bank address etc.
10. **Submission of Bids:** Quotation should be sent to the following address “**The Registrar, Indian Institute of Technology Palakkad, Ahalia Integrated Campus, Kozhipara, Palakkad -678 557, Kerala**”, Phone No: **04923 226 586/590**, Email: purchase@iitpkd.ac.in.
11. **Delivery Period:** The quotation should indicate clearly when delivery and installation to be made.
12. **Delay in Supply or Liquidate damages:** If the supplier fails to deliver the stores within the time specified in the purchase order, the purchaser will recover from the supplier as liquidated damages a sum of one- half of one percent (0.5%) of the P.O value of the undelivered stores for each calendar week of delay. The total liquidated damages shall not exceed five percent (5%) of the P.O price of the unit or units so delayed. Stores will be deemed to have been delivered only when all their component parts are also delivered. If certain components are not delivered in time, the stores will be considered as delayed until such time as the missing parts are delivered.
13. **Late offer:** The quotation received after due date will not be considered. Please ensure that your offer is sent well in advance to reach the Institute by the due date.
14. **Loading and unloading charges will be borne by the supplier.**
15. **Warranty:** Warranty Clause should be indicated clearly.
16. **Acceptance and Rejection:** IIT Palakkad has the right to accept the whole or any parts of the Tender or portion of the quantity offered or reject it in full without assigning any reason.

Yours faithfully,

Encl: Specifications

Registrar, IIT Palakkad

Technical Specifications for 3D Printers

Part A	Single Extruder 3D printer - 3 Numbers
Part B	Dual Extruder 3D printer - 1 Number

The bidder may quote for one or more parts (Part A, Part B). Technical and Financial bid for each part must be enclosed in separate envelopes. All the financial and technical bids must be put in one big envelope and delivered to the purchase section. The evaluation will be done for each part separately and purchase order will be given to the technically qualified bidder, who quotes the lowest price for the respective part. For each of the parts the technical evaluation will be done based on the mandatory requirements for that part mentioned in the specifications.

IIT Palakkad reserves the right to request for a demonstration, if required, of compliance w.r.t to technical specifications. Such a demonstration will be conducted in the Temporary Campus of IIT Palakkad, Ahalia Integrated Campus, Palakkad. The expenses for this demonstration will have to borne by the bidder.

Part A : Single Extruder 3D printer - 3 Numbers

At least 4 standard sized spools (750g or higher) of PLA must be included.

Sl. No.	Parameter	Specification
1.	Printing Technology	Fused Filament Fabrication (FFF) or Fused Deposition Modeling (FDM).
2.	Printer Construction	Steel
3.	Supported Printing Material	Nylon, PolyLactic Acid(PLA), ABS, Copolyester, Polycarbonate, Thermoplastic polyurethane, Polypropylene No proprietary cartridge or RFID restriction on filament sourcing for printer.
4.	Extruder Technology	(a) Single head with easily swappable nozzles
		(b) Bowden-type extruder
5.	Job Size	200 mm x 200 mm x 200 mm (or more)
6.	Layer Resolution	20 micron (or smaller)
7.	Position Resolution	X : (at least) 12.5 micron Y : (at least) 12.5 micron Z : (at least) 5 micron
8.	Nozzle Diameter	0.25mm, 0.4 mm, 0.60 mm, 0.80 mm. At least one nozzle of each type must be included.
9.	Nozzle Temperature	200 deg C (or lower) to 250 deg C (or higher)
10.	Build plate Material	Heated glass, with temperature variability from 50 deg C (or lower) to 80 deg C (or higher).
11.	Build plate leveling	System must interactively assist user in leveling build plate
12.	Print speed	30 mm/s (or lower) to 300 mm/s (or higher)
13.	Software Support and Connectivity	<ul style="list-style-type: none"> i. Open-source software for converting 3D image to 3D print on Windows 7+, Linux ii. Must support import of STL files iii. Machine interface to computer system to be through USB or Ethernet iv. Standalone printing via SD card or USB stick must be supported.
14.	Warranty	At least 1 year

Part B : Dual Extruder 3D printer - 1 Number

At least 1 standard sized spool (750g or higher) of PLA and 1 standard sized spool (750g or higher) of PVA must be included.

Sl. No.	Parameter	Specification
1.	Printing Technology	Fused Filament Fabrication (FFF) or Fused Deposition Modeling (FDM).
2.	Printer Construction	Steel
3.	Supported Printing Material	Nylon, PolyLactic Acid(PLA), ABS, Copolyester, Polycarbonate, Thermoplastic polyurethane, Polypropylene, PolyVinyl Alcohol (PVA). No proprietary cartridge or RFID restriction on filament sourcing for printer.
4.	Extruder Technology	a) Dual head b) Bowden-type extruder c) Non-printing head must be automatically lifted d) Must employ swappable print cores optimized for build-materials and water-soluble materials. e) At least two numbers of PLA-optimized print cores and two numbers of PVA-optimized print core must be quoted.
5.	Job Size	200 mm x 200 mm x 200 mm (or more) while printing with single head
6.	Layer Resolution	20 micron (or smaller)
7.	Position Resolution	X : (at least) 12.5 micron Y : (at least) 12.5 micron Z : (at least) 2.5 micron
8.	Nozzle Diameter	0.25mm, 0.4 mm, 0.8mm At least two nozzles of each type must be included.
9.	Nozzle Temperature	200 deg C (or lower) to 250 deg C (or higher)
10.	Build plate Material	Heated glass, with temperature variability from 50 deg C (or lower) to 80 deg C (or higher).
11.	Build plate leveling	Must support active correction for build plate level imperfection.
12.	Print speed	30 mm/s (or lower) to 300 mm/s (or higher)
13.	Software Support and Connectivity	i. Open-source software for converting 3D image to 3D print on Windows 7(and later) & Linux ii. Must support import of STL, GCode files iii. Machine connectivity via Ethernet and Wi-Fi iv. Standalone printing via SD card or USB stick must be supported.
14.	Warranty	At least 1 year

Who can Participate ?

1. Bidder should be either an Original Equipment Manufacturer (OEM) of 3D printing systems OR an authorized dealer having purchase and support agreement with such an OEM. Proof of authorization needs to be provided.
2. The bidder should be a company registered under the Companies Act, 1956/2013 OR a Limited Liability Partnership (LLP) OR a registered partnership firm OR a sole proprietorship entity. Appropriate Registration/ incorporation certificate to be submitted.
3. Bidder must be in existence in the business of 3D printing systems for a minimum period of 2 previous financial years (i.e., before or since 01-April-2015). Documentary evidence of experience must be provided.
4. Compliance sheet for the specification & OEM Brochure has to be attached along with Technical bid. Vendor has to fill the compliance sheet and mention page number or reference number in OEM brochure. Unfilled / partial filled sheets lead to disqualification.
5. The bidder must provide detailed specification of each equipment/item. Model numbers, data sheets and brochures must be included for each quoted equipment/accessories/item. Specifications corresponding to quoted model number must be available publicly via OEM's website for scrutiny. If not, bid can be disqualified on technical grounds.