



**INDIAN INSTITUTE OF TECHNOLOGY  
KHARAGPUR – 721 302**

No. IIT/KGP/SP/DIY-LAB/2018-19/2

Date: 14th January, 2019

**Sub: Supply of 3D printers with FDM technology**

Indian Institute of Technology Kharagpur, an Institute of National Importance invites sealed two part bids from vendors for **Supply of 3D printers with FDM technology (as per Annexure – I) at IIT Kharagpur.**

**Technical Specification as per Annexure – I, Eligibility Criteria as per Annexure – II, Technical bid Document as per Annexure – III, Signed & Stamped Declaration - Annexure – IV, General Terms & Conditions as per Annexure – V under a Two-Bid System.**

Interested vendors are requested to submit two sealed envelopes containing EMD amount of Rs.4000/- (Envelope-I), Technical Bid (Envelope-II) and Commercial Bid (Envelope-III) placed in a larger sealed envelope super-scribing with reference number (**Tender Notice No. IIT/KGP/SP/ DIY-LAB /2018-19/2 Dated: 14th January, 2019**) to the Office of Joint Registrar, Stores and Purchase Section, Indian Institute of Technology Kharagpur, P.O. Kharagpur Technology, PIN:721302, West Bengal, INDIA **on or before 5<sup>th</sup> February, 2019 at 3:00 p.m.**

The technical bid submitted by the Vendors will be evaluated first by a technical committee and the price bids submitted by the technically qualified vendors will be opened for price comparison.

**The Technical bids will be opened on 5<sup>th</sup> February, 2019 at 4:00 p.m.** in the **Office of Joint Registrar, Stores & Purchase Section, IIT Kharagpur.**

**Dr. Vikranth Racherla  
Associate Professor  
Mechanical Engineering  
IIT Kharagpur**

To,

1. Institute Website
2. CPP Portal
3. Internal Notice Board

**SPECIFICATIONS**

**THE BIDDER MUST SUPPLY AND INSTALL THE ITEMS. DATA SHEETS AND BROCHURES FOR QUOTED ITEMS SHOULD BE PROVIDED.**

**IMPORTANT POINTS:**

- The 3d printer model being quoted must have been sold for more than 2 years in India. Supporting documentation (work orders or purchase orders) for the same must be provided
- More than 50 units of the 3d printer being quoted must have been sold in India till date. Supporting documentation (work orders or purchase orders) for the same must be provided
- The 3d printers must be fully serviceable in India
- Repair/replacement in event of breakdown of machines must be carried out within 5 working days of reporting of issue during the warranty period and/or AMC
- STL files of parts given in addendum to this tender (these files open in Cura) must be printed on the 3d printers being quoted using ABS. The 3d printed parts must be sent along with tender. These parts will also have to be printed on the 3d printers during installation.

| Sl. No. | Item       | Specifications   | Qty. required | Approx. Estimated total Cost (Rs.) |
|---------|------------|--|---------------|------------------------------------|
| 1.      | 3D Printer | <ul style="list-style-type: none"> <li>• <b>Technology:</b> Fused Deposition Modelling</li> <li>• <b>Build Volume:</b> 240 mm x 300 mm x 300 mm or larger</li> <li>• <b>Printing Filament:</b> PLA, PVA, ABS, NYLON, etc.</li> <li>• <b>Number of nozzles:</b> 2 (Dual Nozzles). Must be capable of having e.g. water soluble PVA for one nozzle for support creation and having another material e.g. ABS on another nozzle for part creation</li> <li>• <b>Layer Thickness:</b> 100 microns or smaller</li> <li>• <b>Positioning accuracy:</b> 10 microns or better</li> <li>• <b>Part print precision (approx.):</b> 100 microns or better</li> <li>• <b>Print Speed:</b> Up to 200mm/sec</li> <li>• <b>Extruder/Nozzle Temp:</b> Up to 265 degrees Celsius or higher</li> <li>• <b>Hot Bed Temp:</b> Up to 100 degrees Celsius or higher</li> <li>• <b>Power supply:</b> 240 V (single phase), 50 Hz</li> <li>• <b>Compatibility with 3<sup>rd</sup> party filaments:</b> YES</li> <li>• <b>Connectivity:</b> Wi-Fi, USB, LAN/SD card</li> <li>• <b>Operating System:</b> Window and Mac/Linux</li> <li>• <b>File Format:</b> STL, GCODE, OBJ</li> </ul> | 10 Units      | 16,00,000                          |

|   |                |  |       |        |
|---|----------------|--|-------|--------|
|   |                | <ul style="list-style-type: none"> <li>• <b>Filament Break Warning and Power off Resume:</b> Yes</li> <li>• <b>Bed levelling:</b> Automatic</li> <li>• <b>Body:</b> Powder coated metal frame or equivalent</li> <li>• <b>Working zone:</b> Closed (with a view glass)</li> <li>• <b>Machine Dimension (approx.):</b> 600 x 600 x 800 mm or smaller</li> </ul> |       |        |
| 2 | ABS Filament   | <ul style="list-style-type: none"> <li>• <b>1.75 mm diameter or as appropriate. Must be compatible with 3d printer being quoted.</b></li> </ul>  | 25 kg | 25,000 |
| 3 | PLA Filament   | <ul style="list-style-type: none"> <li>• <b>1.75 mm diameter or as appropriate. Must be compatible with 3d printer being quoted.</b></li> </ul>  | 25 kg | 25,000 |
| 4 | PVA Filament   | <ul style="list-style-type: none"> <li>• <b>1.75 mm diameter or as appropriate. Must be compatible with 3d printer being quoted.</b></li> </ul>  | 25 kg | 25,000 |
| 5 | Nylon Filament | <ul style="list-style-type: none"> <li>• <b>1.75 mm diameter or as appropriate. Must be compatible with 3d printer being quoted.</b></li> </ul>  | 25 kg | 25,000 |

**MINIMUM ELIGIBILITY CRITERIA:**

- (a) Proof of Registration of the bidder under relevant law, such as Companies Act, and / or Shops & Establishment Act or Trade License from appropriate authority etc.
- (b) All bidders should submit the copy of PAN Card, GST Registration Certificate.
- (c) The bidder must submit copies of acknowledgement of Income Tax return for the last three years.
- (d) Must have necessary dealership/distributors certificate in case of Authorised Dealer/ Distributor.
- (e) Filled in declaration as per the Annexure –IV.
- (f) The 3d printer model being quoted must have been sold for more than 2 years in India. Supporting documentation (work orders or purchase orders) for the same must be provided.
- (g) More than 50 units of the 3d printer being quoted must have been sold in India till date. Supporting documentation (work orders or purchase orders) for the same must be provided.
- (h) The 3d printers must be fully serviceable in India.
- (i) Repair/replacement in event of breakdown of machines must be carried out within 5 working days of reporting of issue during the warranty period and/or AMC.
- (j) STL files of parts given in addendum to this tender (these files open in Cura) must be printed on the 3d printers being quoted using ABS. The 3d printed parts must be sent along with tender.

**Bidders must submit the documentary proof in support of meeting the minimum eligibility criteria. Simply an undertaking by the Bidder for any item of the criteria shall not suffice the purpose. All the documentary proof must be listed on the letter head, to be submitted with the Tender Document signed and stamped.**

**TECHNICAL BID DOCUMENT**

FORMAT TO BE FILLED BY THE OEM OR AUTHORIZED VENDORS FOR SUPPLYING ITEMS PER ANNEXURE-I at IIT Kharagpur

1. Name of the Tenderer(Copy of Registration Certificate/  
Trade License) :
2. Status of the Tenderer(attach documents, if  
registered company/partnership/propriety ship) :
3. Details of key top official/authorized official with tele links for :  
Contact persons (attach details)
4. Copies of PAN Card, GST Registration certificate,  
IT Return for last three financial years :
5. Copy of product literature, technical leaflet for which prices  
have been quoted :
6. Signed copy of the tender document, with company seal :
7. Details of EMD - Bank Draft No. and date :
8. Make and model of 3d printer being quoted :
9. Period for which 3d printer being quoted has been sold :
10. No. of units of 3d printer being quoted sold till date (approx.) :

Certified that all above information are correct to the best of my/our information, knowledge and belief.

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Dated signature & seal of the Vendor

**NOTE : This must be submitted in the “TECHNICAL BID”.**

**DECLARATION**

I, -----Son /Daughter of Shri -----  
----- Proprietor/Partner/CEO/MD/Director/Authorized Signatory of  
M/s. ----- am competent to sign this declaration and  
execute this tender document.

I have carefully read and understood all the terms and conditions of the tender and hereby convey my acceptance of the same.

The information/ documents furnished along with the above application are true and authentic to the best of my knowledge and belief.

I/ we/ am are well aware of the fact that furnishing of any false information/ fabricated document would lead to rejection of my tender at any stage besides liabilities towards prosecution under appropriate law.

Each page of the tender document and papers submitted by my Company is authenticated, sealed and signed, and I take full responsibility for the entire documents submitted.

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Signature of the Authorized Person

Date: -----

Full Name : -----

Place: -----

Company Seal : -----

**GENERAL TERMS AND CONDITIONS**

(1) Important Dates

- **Last Date of Submission of Sealed Bids: 5<sup>th</sup> February, 2019 at 3:00 p.m.**  
**(In the Office of the Joint Registrar, Stores & Purchase Section, Indian Institute of Technology Kharagpur)**
- **Date of opening of the Technical Bids: 5<sup>th</sup> February, 2019 at 4:00 p.m.**  
**(In the Office of the Joint Registrar, Stores & Purchase Section, Indian Institute of Technology Kharagpur)**

2.(i) Rate: The **rate quoted must be inclusive of installation and all admissible taxes**. All the charges like Installation charges etc., as applicable must be shown separately. The stores are required to be dispatched on F.O.R. IIT Kharagpur. The risk of damage or loss in transit if any will be that of the suppliers. Manufacturer's price list, Technical leaflet, samples, catalogue whenever applicable, should invariably be submitted.

(ii) GST: **Must be shown separately**

(iii) Way Bill: This is issued only on request of the vendor after submitting the Tax Invoice and other necessary details of the waybill.

3. **Delivery Period:** The stores are required to be delivered/dispatched within 45 days from the date of the purchase order. **No mobilization advance is payable against the Purchase Order. Custom Duty Exemption (51/96) Certificate will be provided by the Institute on request by the vendor.**

4. **Payment Terms:**

100% payment shall be made after successful installation and commissioning duly certified by the concerned Head of the Department.

No advance/mobilization support, is payable against supply of stores/works.

In the event of failure to deliver the stores beyond the specified date, liquidated damages @ 1% per month or part thereof in respect of the value of stores will be deducted, subject to a maximum of 5%; alternately the order will be cancelled and the undelivered stores purchased from elsewhere at the risk and expense of the vendor.

5. **Quality & Specification of Stores:** The stores offered should be of best quality available, unless otherwise specified, conforming strictly to the National/International specification. The Institute reserves the right to reject such stores if found unacceptable on these grounds. The guarantee and warranty offered be specifically mentioned.

6. **Period of Validity:** The quotation shall remain valid for acceptance at least for a period of 90 days from the date of opening of the Price Bid.

7. **Earnest Money Deposit (EMD):** An amount of Rs. 4,000.00 (Rupees four thousand only) in the form of Demand Draft be enclosed along with the bid. The E.M.D. shall be from any scheduled Bank and to be drawn in favour of "Indian Institute of Technology Kharagpur", payable at Kharagpur. The validity of the EMD should be 2 (two) months from the date of issue. **Any bid without EMD will not be considered.** This will be refunded to the unsuccessful vendors once the process of technical and price bid opening is complete. No interest is payable on refunds. EMD shall be forfeited if the selected vendor accepts the supply order, but is unable to execute the same. **E.M.D. should be enclosed separately in an envelope and stapled with the Technical Bid document.**

8. **Guarantee/Warranty: 3 years Comprehensive Warranty,** from the date of successful installation and/or commissioning of the items.

9. **Rejection of Offers:** The Institute reserves the right to ignore or reject any offer including the lowest without assigning any reason. The Institute does not bind itself to accept the lowest offer.

10. **Dispute :** In case of any dispute, the decision of the Director of this Institute shall be final and binding on the bidders.

11. **All tenders are to** be submitted or handed over to the office of **Joint Registrar (Stores & Purchase Section), IIT Kharagpur.** The bids (technical and price bids) once submitted shall be the property of the Institute and shall not be returned to the vendor in future.

12. **The person/officer signing** the tender/bid documents should be delegated with an appropriate authority.

13. **Opening of Price Bids :** The Price Bid(s) of only those vendor(s) who are found technically qualified will be opened and the same will be opened before the technically qualified vendor(s). **The date for opening of price bids will be notified separately. Price Comparison will be done as per total amount of each table basis. The bidder may supply and install the items mentioned in all the tables (A to G as per ANNEXURE – VI) or any one or more than one tables as per bidder's capacity.**

14. Tenderer or his/her authorized representative (with proper authorization letter for opening of technical bids and also for opening of price bids) may choose to be present at the time of opening of Technical Bids/Price Bids.

15. **JURISDICTION:**

All questions, disputes, or differences arising under, out of or in connection with the contract, if concluded, shall be subject to the exclusive jurisdiction at the place from which the acceptance of Tender is issued i.e. Jurisdiction of KOLKATA HIGH COURT. Acceptance to this effect is also necessary at the time of opening of Technical Bid.



16. **IMPORTANT**

1. A bid submitted with false information will not only be rejected but also the OEM/vendor will be debarred from participation in future tendering process.
2. The OEMs/Vendors need to submit a certificate during opening of technical bids that they are not currently debarred or blacklisted in IIT Kharagpur for any supplies, products or services, or at present in any national organization or educational institute/university.
3. In case of any dispute, the decision of the Director of this Institute shall be final and binding on the bidders.
4. For any query pertaining to this bid document, correspondence be addressed to

(a) **Dr. Vikranth Racherla,**  
**Mechanical Engineering Department**  
**I.I.T., Kharagpur, Pin-721302**  
**[e-mail : [vikranth.racherla@mech.iitkgp.ernet.in](mailto:vikranth.racherla@mech.iitkgp.ernet.in)**  
**Ph : (03222) 282900]**

(b) **Joint Registrar (Stores & Purchase Section)**  
**Indian Institute of Technology Kharagpur, Kharagpur-721 302**  
**[Ph: 03222-282210, 282216]**

In case the due date for opening and submission of tender **happens to be a holiday, the same will be happened on the next working day.** The timings will however remain unchanged. **Please Note that the Institute remains closed during Saturdays & Sundays.**

NOTE : If the material or finished work are not found acceptable, the Bidder shall arrange for the replacement of materials required for re-executing the work as per Purchase Order.

Tender Ref No.: IIT/KGP/SP/DIY-LAB/2018-19/2

FORMAT FOR PRICE BID

| Sl. No. | Item       | Specifications   | Qty. required | Make and Model | Per Unit Price | Taxes | Total Amount |
|---------|------------|--|---------------|----------------|----------------|-------|--------------|
| 1.      | 3D Printer | <ul style="list-style-type: none"> <li>• <b>Technology:</b> Fused Deposition Modelling</li> <li>• <b>Build Volume:</b> 240 mm x 300 mm x 300 mm or larger</li> <li>• <b>Printing Filament:</b> PLA, PVA, ABS, NYLON, etc.</li> <li>• <b>Number of nozzles:</b> 2 (Dual Nozzles). Must be capable of having e.g. water soluble PVA for one nozzle for support creation and having another material e.g. ABS on another nozzle for part creation</li> <li>• <b>Layer Thickness:</b> 100 microns or smaller</li> <li>• <b>Positioning accuracy:</b> 10 microns or better</li> <li>• <b>Part print precision (approx.):</b> 100 microns or better</li> <li>• <b>Print Speed:</b> Up to 100mm/sec or higher</li> <li>• <b>Extruder/Nozzle Temp:</b> Up to 265 degrees Celsius or higher</li> <li>• <b>Hot Bed Temp:</b> Up to 100 degrees Celsius or higher</li> <li>• <b>Power supply:</b> 240 V (single phase), 50 Hz</li> <li>• <b>Compatibility with 3<sup>rd</sup> party filaments:</b> YES</li> <li>• <b>Connectivity:</b> Wi-Fi, USB, LAN/SD card</li> </ul> | 10 Units      |                |                |       |              |

|                              |                |  |       |  |  |  |                                |  |
|------------------------------|----------------|--|-------|--|--|--|--------------------------------|--|
|                              |                | <ul style="list-style-type: none"> <li>• <b>Operating System:</b><br/>Window and Mac/Linux</li> <li>• <b>File Format:</b> STL, GCODE, OBJ</li> <li>• <b>Filament Break Warning and Power off Resume:</b><br/>Yes</li> <li>• <b>Bed levelling:</b> Automatic</li> <li>• <b>Body:</b> Powder coated metal frame or equivalent</li> <li>• <b>Working zone:</b> Closed (with a view glass)</li> <li>• <b>Machine Dimension (approx.):</b> 600 x 600 x 800 mm or smaller</li> </ul> |       |  |  |  |                                |  |
| 2                            | ABS Filament   | <ul style="list-style-type: none"> <li>• <b>1.75 mm diameter or as appropriate. Must be compatible with 3d printer being quoted.</b></li> </ul>  | 25 kg |  |  |  |                                |  |
| 3                            | PLA Filament   | <ul style="list-style-type: none"> <li>• <b>1.75 mm diameter or as appropriate. Must be compatible with 3d printer being quoted.</b></li> </ul>  | 25 kg |  |  |  |                                |  |
| 4                            | PVA Filament   | <ul style="list-style-type: none"> <li>• <b>1.75 mm diameter or as appropriate. Must be compatible with 3d printer being quoted.</b></li> </ul>  | 25 kg |  |  |  |                                |  |
| 5                            | Nylon Filament | <ul style="list-style-type: none"> <li>• <b>1.75 mm diameter or as appropriate. Must be compatible with 3d printer being quoted.</b></li> </ul>  | 25 kg |  |  |  |                                |  |
| <b>Total Amount in Word:</b> |                |  |       |  |  |  | <b>Total Amount in Figure:</b> |  |

Note: Comprehensive warranty for 3d printer and filaments should be for 3 years

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Dated signature & seal of the Vendor