



INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

KHARAGPUR – 721302
Centre for Robotics

Tender Ref no: IIT/CFR/XIR_OTG/REC/1/3DPrinter/2018-19/01 Date: 26.09.2018

Sub: Supply, installation and commissioning of one 3D printer at Centre for Robotics, IIT Kharagpur

Indian Institute of Technology Kharagpur invites sealed two part bids from reputed **Original Equipment Manufacturers (OEMs) OR their Authorized Dealers/Distributor**, who have adequate credential for supply of **one 3D printer** to the **Centre for Robotics at IIT Kharagpur**. The entire job must be completed within 30 days from the date of issue of Purchase Order.

Interested and eligible **Original Equipment Manufacturers (OEMs) OR their Authorized Dealers/Distributor** are requested to submit two sealed envelopes containing Technical Bid (Envelope – A) and Commercial Bid (Envelope – B) as per Annexures – I to VII placed in a larger sealed envelope super-scribing with reference number (**Tender No. IIT/CFR/XIR_OTG/REC/1/3DPrinter/2018-19/01 Date: 26.09.2018**) to “**Prof. Sankha Deb, Office of Mechanical Engineering Department, Indian Institute of Technology, Kharagpur, P.O. Kharagpur Technology, PIN : 721 302**” *on or before 23.10. 2018 at 3:00 PM.*

The technical bid will be evaluated first and price bids will be opened only in respect of those OEMs/Vendors, who are found technically qualified after evaluation of Technical bids. The **bids will be opened on 24.10.2018 at 11.00AM** in the **Office of Mechanical Engineering Department, IIT Kharagpur.**

Kindly refer to the Institute website www.iitkgp.ac.in [link: Tenders] for complete tender details. The same is also available in the CPP Portal [<https://eprocure.gov.in/eprocure/app>]. If there is any corrigendum/addendum, it shall only be published on Institute's Website and Central Public Procurement Portal.

Prof. Sankha Deb
Mechanical Engineering Department

IIT Kharagpur

Copy to

1. Notice Board
2. Institutes' Web
3. CPP

1. Technical Specifications with certain terms and conditions**3D Printer – 1 No.**

Specifications	Requirement
3D printing Technology	Fused filament fabrication
Nozzle diameter	0.25, 0.4, 0.6 and 0.8 mm
Print head	Swappable nozzle
Printable size	L=220 mm, B=220 mm, H= 200 mm
Print head travel speed	30 to 300 mm/s
Build speed	0.25 nozzle: up to 8 mm ³ /s 0.4 nozzle: up to 16 mm ³ /s 0.6 nozzle: up to 23 mm ³ /s 0.8 nozzle: up to 24 mm ³ /s
Layer Resolution	0.25 mm nozzle: 150 to 60 micron 0.4 mm nozzle: 200 to 20 micron 0.6 mm nozzle: 400 to 20 micron 0.8 mm nozzle: 600 to 20 micron
XYZ resolution	~12.5, ~12, 5 micron or better
Nozzle temperature	180 °C to 260 °C
Build plate temperature	50 °C to 100 °C
Nozzle heat up time	~ 1 minute
Build plate heat up time	< 4 minutes
Build plate leveling	Automatic/ Assisted
Supported Materials	PLA, ABS, CPE, CPE+, PC, Nylon, TPU 95A, and PP.
Supported file types	STL, OBJ, X3D, 3MF, BMP, GIF, JPG, PNG
Software	To convert 3D model into a file that the printer

	can use
Supported OS	Windows and Linux
Plugin integration	SolidWorks, Autodesk Inventor, Siemens NX,
Connectivity	USB, SD Card, WiFi, Ethernet, Etc.
Calibration	Calibration card to level the build plate
AC Power	~230 V, 50-60 Hz, ~150-220W
Warranty	Atleast3 years
Starter kit of 3D printer filaments	PLA 3D printer filaments

ANNEXURE-II

GENERAL TERMS AND CONDITIONS

- 1. Last Date of Submission of Sealed Bids (both technical and price bids, separately in two covers and placed, sealed in one envelope):** 23.10.2018 up to 3.00 P.M.
- 2. The Technical bids** will be opened on dt:24.10.2018 at 11A.M. in the Office of **Prof. Sankha Deb**, Mechanical Engineering Department, IIT Kharagpur.
- 3. Payment Terms & Performance Bank Guarantee (PBG):** 90% payment will be made on submission of shipping documents and balance 10% payment will be made on installation, commissioning and submission of PBG for performance period if the payment is made by LC, otherwise 90% will be made after successful installation and commissioning duly certified by the concerned Head of Department. Balance 10% may be released against submission of Performance Bank Guarantee to the tune of 10% of the total purchase order value. PBG shall be issued from any nationalized bank/ commercial bank, validity which shall be warranty period plus 60 days drawn. No advance/mobilization support, is payable against supply of stores. 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.
- 4. Warranty/Guarantee & On-site skill support:** Three years (03) onsite comprehensive OEM warranty from the date of successful installation and commissioning. The firm has to guarantee supply of spares for a minimum period of 10 years.
- 5. Earnest Money Deposit (EMD):** An amount of **Rs. 5,000/- (Rupees Five thousand only)** in the form of Demand Draft drawn in favour of “Indian Institute of Technology

Kharagpur”, **payable at Kharagpur or Bank Guarantee as per format at Annexure VI.** E.M.D. should be enclosed separately in an envelope and stapled with the Technical Bid document superscribing EMD. The validity of the EMD should be 6 (six) months from the date of issue. Any bid without EMD will be summarily rejected. No interest is payable on EMD. EMD will be refunded to the unsuccessful bidder, finalization of the tender process. **The EMD of vendor awarded with the contract to be treated as part of security deposit towards Performance Guarantee. No interest is payable on Security Deposit.** Security Deposit shall be forfeited if the selected vendor after award of contract, fails to execute the same. **EMD will be returned after the receipt of PBG.**

6. **Tender Fee:**Rs. 500/- (By way of demand draft from any Nationalized Bank /Commercial Bank and paid in favour of “Indian Institute of Technology Kharagpur”, payable at Kharagpur).
7. **IIT Kharagpur** will give exemption for submission of tender fee and EMD who are registered with MSME, NSIC or start-ups as recognised by DIPP as per revised rule 170 of GFR – 2017 only. However proper and valid document in this regard must be submitted by the bidders in support of their claim.
8. Tender fee and EMD should be kept in separate covers and place in technical bid cover.
9. **Delivery of Stores:** The store items are to be supplied within 90 days from the date of receipt of the Purchase Order.
10. **Price:**
 - a. PRICE may be quoted either in INR or in foreign currency.
 - b. Where tenderer intends to quote in Indian Rupees (INR), the price should be quoted “FOR IIT Kharagpur” basis. The price should be all inclusive.
 - c. Indian institute of Technology Kharagpur is a public Funded Academic & Research institute under the minister of Human Resource Development and is eligible for GST @5% vide Notification No.47/2017 dated:14.11.2017 and 10/2018- Integrated Tax (Rate) dated:25.01.2018 by the Ministry of Finance, Department of Revenue. Necessary certificate in this regard will be issued as per requirement and on request of the successful bidder.
 - d. Where tenderer intends to quote in foreign currency FCA/FOB source port price by Air/Sea to be quoted. In case of comparison between FOR IIT Kharagpur (quoted in INR) and FOB/FCA price (quoted in foreign currency) 20% will be added on FOB/FCA price after conversion to INR.
 - e. Tenderer, who are Indian Agents of OEMs, should furnish a clear declaration as follows: We declare that I am/we are Accredited Agents of the suppliers aboard.

DGS&D enlistment certificate needs to be attached (applicable only for the Indian Agents).

- f. Foreign bidders to disclose the name and address of agent and representative in India.
 - g. IIT Kharagpur is registered DSIR, Govt. of India and eligible for exemption for payment of Customs Duties in Terms of Government of India Notification No.51/96-Customs dated 23.07.96. Necessary certificate in this regard will be issued as per requirement and on request of the successful bidder.
 - h. Agency Commission, if any will be paid to the Indian agents in Rupees on receipt of the equipment and after satisfactory installation. Agency Commission will not be paid in foreign currency under any circumstances.
 - i. The unit prices should be for the same unit as indicated in the Schedule to tender enquiry and not for any other unit.
 - j. Discount, if any, should be indicated separately/prominently.
 - k. Offers should normally be on fixed and firm price basis. Any clause making price variation will not be acceptable.
- 11. Bid:** Technical Bid and Price Bid should be submitted in two separate sealed envelopes quoting reference number on the top of the envelope. **EMD should be enclosed with the Technical Bid documents, in separate sealed envelopes, stapled with the packet containing Technical Bid documents.**
- 12. Acceptance of Tender:** The Authority of IIT Kharagpur does not bind itself to accept the lowest priced bid and reserves the right to reject any or the entire tender bids received without assigning any reason thereof.
- 13.** The addendum/corrigendum if any shall be published on Institute's **Website i.e. www.iitkgp.ac.in and on CPP Portal.**
- 14. Extra Features:** If the bidder provides any other extra features on the Hardware or Software which are not mentioned in the tender product specifications, then that shall be highlighted in clear terms, with documentary evidence/literature.
- 15. Compliance List:** The proposal should be properly indexed and a compliance list against the technical specifications should be provided.
- 16. Service:** Response to ensure quality of services, the deputed Engineer from the OEM/Vendor shall have a minimum of 2 years of experience in the relevant field and must be in the payroll of the OEM/Vendor.
- 17. Installation and Commissioning:** Free of cost at the Centre for Robotics, IIT, Kharagpur. The supplier must ensure timely installation of Experimental test setup with necessary support to the indenters, as per details and lists to be made available by the Stores & Purchase Section or the indenting Departments/Centres/Schools.
- 18. Period of Validity:** Bids shall remain valid for acceptance for a period of 90 days from the date of opening of the price bid.
- 19.** The benefit of any downward price revision (revision on account of budget/financial policy, tax revision, EPZ etc.) is to be given to IIT Kharagpur by the selected OEM/vendor.

20. Past Performance of the Vendors will be judged at the time of Technical Evaluation.
21. The Institute does not bind itself to offer any explanation to those bidders whose technical bids have not been found acceptable by the Technical Evaluation Committee of the Institute.
22. Bidders should enclose the following documents:
- Certificate of Registration / Trade License
 - Copy of mandatory test reports, national testing/reliability and endurance test reports etc., certified or conducted at the manufacturing site, granted by the bureaus/quality control departments/national testing laboratories.
 - Proforma Price Bid (without mentioning the price rate) may be attached with technical bids
 - Port or place of Shipment: Should be mentioned in the quotation.
 - Purchase order to be placed on: Should be mentioned in the quotation with full address, email addresss, phone number.
23. All tenders are to be handed over in a sealed box in the Office of Mechanical Engineering Department, IIT Kharagpur-721302, India. 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. For speed post, the Postal Address is “

Prof. Sankha Deb
Mechanical Engineering Department
IIT Kharagpur-721302, West Bengal (state)
India

24. **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 by email.
25. Tenderer or his/her authorized representative (with proper authorization letter for attending 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.

26. Technical Compliance Sheet :

Specifications	Requirement	Compiled (Yes or NO)
3D printing Technology	Fused filament fabrication	

Nozzle diameter	0.25, 0.4, 0.6 and 0.8 mm	
Print head	Swappable nozzle	
Printable size	L=220 mm, B=220 mm, H= 200 mm	
Print head travel speed	30 to 300 mm/s	
Build speed	0.25 nozzle: up to 8 mm ³ /s 0.4 nozzle: up to 16 mm ³ /s 0.6 nozzle: up to 23 mm ³ /s 0.8 nozzle: up to 24 mm ³ /s	
Layer Resolution	0.25 mm nozzle: 150 to 60 micron 0.4 mm nozzle: 200 to 20 micron 0.6 mm nozzle: 400 to 20 micron 0.8 mm nozzle: 600 to 20 micron	
XYZ resolution	~12.5, ~12, 5 micron or better	
Nozzle temperature	180 °C to 260 °C	
Build plate temperature	50 °C to 100 °C	
Nozzle heat up time	~ 1 minute	
Build plate heat up time	< 4 minutes	
Build plate leveling	Automatic/ Assisted	
Supported Materials	PLA, ABS, CPE, CPE+, PC, Nylon, TPU 95A, and PP.	
Supported file types	STL, OBJ,X3D, 3MF, BMP, GIF, JPG, PNG	
Software	To convert 3D model into a file that the printer can use	
Supported OS	Windows and Linux	
Plugin integration	SolidWorks, Autodesk Inventor, Siemens NX,	
Connectivity	USB, SD Card, WiFi, Ethernet, Etc.	
Calibration	Calibration card to level the build plate	
AC Power	~230 V, 50-60 Hz, ~150-220W	
Warranty	Atleast3 year	
Starter kit of 3D printer filaments	PLA 3D printer filaments	

IMPORTANT

- I. Director may accept or reject any or all the bids in part or in full without assigning any reason and does not bind himself to accept the lowest bid. The Institute at its discretion may change the quantity/upgrade the criteria/drop any item or part thereof at any time before placing the Purchase Order.
- II. The technical bid will be evaluated first and price bids will be opened in respect of those OEMs/Vendors, who are found technically qualified after evaluation of Technical bids. Date for opening price bids will be intimated later.
- III. 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.
- IV. In case of any dispute, the decision of the Director of this Institute shall be final and binding on the bidders.
- V. For any query pertaining to this bid document, correspondence is to be addressed to the End user

Prof. Sankha Deb,

Department of Mechanical Engineering,

Indian Institute of Technology Kharagpur- 721302, West Bengal, India

[Phone:+91-3222-282912 (Off)]

Email: - **sankha.deb@mech.iitkgp.ac.in**

- VI. In case the due date for opening tender happens to be a holiday, the same will be opened on the next working day. The timings will however remain unchanged. Please Note that the Institute remains closed on Saturday & Sunday.
- VII. The Bidders are requested to submit the bids after issue of clarifications only considering the changes made if any. Bidders are totally responsible for incorporating/complying the changes/amendments issued if any, in their bid.

INSTRUCTIONS & SPECIAL CONDITIONS

1. **GENERAL:** Tenderer, who are Indian Agents of OEMs, should furnish a clear declaration as follows: We declare that I am/we are Accredited Agents of the suppliers aboard. DGS&D enlistment certificate needs to be attached (applicable only for the Indian Agents).
2. **DEVIATION FROM SPECIFICATIONS:** It is in the interest of the tenderer to study the specifications in the tender schedule thoroughly before quoting so that, if the tenderer makes any deviations, the same are prominently brought out in the body of the tender. If you need to add any optional items to your system in order to meet our specifications, you are requested to quote for the total including the option required to suit our requirements. Otherwise, your tender will not be considered at all. 3. **TENDERERS SHALL SUBMIT ALONG WITH THEIR TENDER:** (i) Complete address and tele links for contact persons of principals and Indian agent offices dealing with this purchase. (ii) Name and full address of the OEM's Banker and their swift code. (iii) Port of shipment and Country of origin is to be provided for each item. (iv) Purchase order to be placed on: Should be mentioned in the quotation with full address.
4. **PERFORMANCE BANK GUARANTEE:** On behalf of the Principal, Indian Agent must be able to provide Performance Bank Guarantee of the amount equivalent to the 10% of the cost of equipment from any Nationalized Bank. The Performance Bank Guarantee is required for the entire period of Warranty. Performance Bank Guarantee must remain valid for a period sixty days beyond the expiry of the Warranty Period. Bid security will be refunded back on submission of performance Security.
5. **GUARANTEE:** The tenderer has to declare that the goods sold to the buyer under this contract shall be of the best quality and workmanship and shall be strictly in accordance with the specifications.
6. **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.
7. **ACKNOWLEDGMENT:** It is hereby acknowledged that we have gone through all the points listed under "Instructions & Special Conditions" outlined above, and those in the accompanying note on "Important Conditions", and we agree to abide by them under the penalty of permanent disqualification for Tender participation and for related penal actions for non-abidance of the conditions.
8. Interested vendors must be able to supply adequate spares and consumable during three years of comprehensive warranty. Vendor should also ensure trouble free service and performance for another seven years beyond three years Comprehensive Warranty Period with adequate spares and accessories.

Eligibility Criteria / TECHNICAL BID

S. No	Description	Submitted (Yes / No)
1	Registration Certificate	
2	PAN and GST Certificates	
3	Status of the Tenderer (attach documents, if registered company/ partnership /proprietorship)	
4	Whether OEM/representing foreign principle (attach copy of certificate/authorization)	
5	Details of key top official/authorized official with e-mail id and contact number	
6	Income Tax Returns of latest last three years	
7	Current list and address of clients where One similar material/ products has been supplied (attach Pos) and satisfactory certificates from the users.	
8	Other documents like literature, catalogues etc.,(if any)	

NOTE:

- 1. Attach all relevant documents in the same serial order as above, properly indexed, duly signed.**
- 2. This is to be submitted in a separate sealed envelope** super scribing “TECHNICAL BID”, Notice inviting **Tender Reference no:** _____ **date:** _____ and name of the bidder.
- 3. Price bid of that company/firm only will be opened which do technically qualify, for further consideration. Attach all relevant documents in the same serial order as above, properly indexed, duly signed and sealed.**

Signature and seal of the Bidder

DECLARATION

1. 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.
2. Tender ref no: _____ dt:_____ . I have
carefully read and understood all the terms and conditions of the tender and hereby convey
my acceptance of the same.
3. The information/ documents furnished along with the above application are true and
authentic to the best of my knowledge and belief.
4. 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.
5. 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.
6. I/we hereby confirm and declare that I/we am/are not blacklisted /De-registered / debarred
by any Government department/ Public Sector Undertaking/ Private Sector/ or any other
agency for which we have Executed/ Undertaken the works/ Services.

Signature of the Authorized Person

Date: -----

Full Name: -----

Place: -----

Company Seal: -----

MODEL BANK GUARANTEE FORMAT FOR FURNISHING EMD

Whereas(thereinafter called the “tenderer”) has submitted their offer dated for the supply of (hereinafter called the “tender”) against the purchaser’s tender Notice No.
KNOW ALL MEN by these presents that WE of having our registered office at are bound unto(hereinafter called the “Purchaser”) in the sum of for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank thisDay of 20

THE CONDITIONS OF THIS OBLIGATION ARE

- (1) If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
- (2) If the tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity:
 - (a) If the tenderer fails to furnish the Performance Security for the due performance of the contract.
 - (b) Fails or refuses to accept/execute the contract.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including 45 days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the authorized officer of the Bank)
Name and designation of the officer
Seal, name & address of the Bank and address of the Branch

(on the official Letterhead of the firm)
PRICE BID

Ref: IIT/CFR/XIR_OTG/REC/1/3DPrinter/2018-19/01

Date: 26.09.2018

Tender for Supply, Installation, Testing and Commissioning Fofone 3D Printer with 3 Years of warranty.

No .	Description	Qty	Unit Price without taxes (in Rs.)	Taxes Rs	Unit Price with Taxes (in Rs.)	Total Amount (in Rs.)
		A	B	C	D=(B+C)	E =(A * D)
1	3D Printer Make: Model:					

In words : Rupees _____

1. In case of discrepancies between words and figures, the bid which is least of the two versions will be confirmed.
2. Indian institute of Technology Kharagpur is a public Funded Academic & Research institute under the minister of Human Resource Development and is eligible for GST @5% vide Notification No.47/2017 dated:14.11.2017 and 10/2018- Integrated Tax (Rate) dated:25.01.2018 by the Ministry of Finance, Department of Revenue.
3. Above quoted price is including transportation, installation and other Charges.

Signature of the bidder along with seal

Checklist for Enclosures

(Bidder Should fill up YES or NO and page no without fail)

S.No	Bid Enclosures	Yes/ No	Pg. No .
	Technical Bid (Envelope – A) contains the following documents		
1	Registration Certificate		
2	PAN and GST Certificates		
3	Status of the Tenderer (attach documents, if registered company/ partnership /proprietorship)		
4	Whether OEM/representing foreign principle (attach copy of certificate/authorization)		
5	Details of key top official/authorized official with e –mail id and contact number		
6	Income Tax Returns of latest last three years		
7	Current list and address of clients where three similar material/ products has been supplied (attach Pos) and satisfactory certificates from the users.		
8	Other documents like literature, catalogues etc.,(if any)		
9	Tender fee (should be kept in one envelop cover and place technical bid)		
10	EMD (Should be kept in one envelop cover and place in technical bid cover)		
	Financial Bid (Envelope – B)		
1	Price Bid (As per the format given at Annexure – VII)		

Note : All pages of the bid documents must be serially numbered and signed.