

Indian Institute of Technology Kharagpur

Tender No. PMW/IIT/2019/01

Dated: 06 February 2019

Subject: Procurement of 3D Printing Machine

Sealed quotations are invited from reputed Original Equipment Manufacturers (OEM) or their authorized distributors for execution of a project being executed at IIT Kharagpur. Interested vendors are requested to send their sealed bids under a two cover system as per requirement mentioned in tender document, along with the Technical Specifications & Compliance Certificate (as mentioned in Annexures – I) of the tender document. Details are also mentioned in the Institute website www.iitkgp.ac.in [link: <http://www1.iitkgp.ac.in/topfiles/tenders.php>]. The final quotation for consideration is to be sent in a sealed packet, containing two separate sealed envelopes (Technical Bid and Price Bid) duly superscripted with (Tender No PMW/IIT/2019/01 dated 06.02.2019) to Prof. Manoj Kumar Mondal, Rajendra Mishra School of Engineering Entrepreneurship, Indian Institute of Technology Kharagpur, P.O. Kharagpur Technology, PIN: 721 302 on or before 28th February 2019 (Thursday) at 3:00 pm. The technical bids (should also contain detailed un-priced bill of material) will be opened on 1st March 2019 (Friday) in the Office of the Head, Rajendra Mishra School of Engineering Entrepreneurship, Indian Institute of Technology Kharagpur, in the presence of the vendors/ or their authorized representatives and price bids will be opened (to be notified separately), only of those firms, who will be found technically qualified/short listed, after evaluation of their technical bids.

Technical bid should accompany some non-returnable sample objects printed using ABS and NYLON filaments by the machine for which quotation is submitted with a view to provide fair idea on the quality of print by the machine under quotation. The quality of the sample will be used as a criterion for technical qualification.

Prof. V K Tewari
Prof. K N Tiwari
Prof. Manoj K Mondal

Encl: Annexure – I, II, & III

Copy to:

- 1. Notice Board**
- 2. Institute website**
- 3. CPPP**

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Annexure - I**Technical Specifications of 3D Printer**

	The machine must be CE certified
Print Technology:	FFF/ Fused Deposition Molding
Build Volume (W×D×H):	11×12×11.8 in / 280×305×300 mm and higher
Number of extruder / nozzle:	Dual extruder (with soluble support material)
Print Head:	Dual-head with electronic lifting system
Filament Diameter:	1.75 mm
Color options:	Dual color print or dual material print.
Extruder traveling speed:	Upto 300 mm/s for XY motion
Chassis & body:	Powder coated steel, illuminated for viewing printed parts.
Platform type:	Removable platform for easy print handling.
XY Step Size:	0.78125 micron ; Z Step Size: 0.078125 micron
Printed output accuracy:	+/- 50 to 150 microns.
Print Head Travel Speed:	30 - 150 mm/s
Build Plate:	Heated aluminum build plate with magnetic holding
Max Build Plate Temperature:	110 °C
Heated Bed Material:	Silicone
Scaling:	Inch to mm scaling in one click, Scale by X
Easy Support Removal, Toolpath Generation	Support - Object interface flow value can be changed as per requirement for easy support removal.
Includes Deliverables	Print cleaning accessories kit, Machine Interface Software & Manuals, Machine maintenance accessories kit
Build Plate Leveling:	Pre-calibrated leveling
Supported Materials:	PLA / ABS / HIPS / PC / NYLON / PETG / ASA / PP / PVA
Nozzle Diameter:	0.4/ 0.6 mm
Max Nozzle Temperature:	300 °C
Connectivity:	Wi-Fi, LAN, USB port, Live camera (onboard camera)
Noise emission (acoustic):	< 50dB (A) when building
Operating Ambient Temperature:	15-35 °C, 10-90% RH non-condensing

Storage Temperature:	-25°C to +55°C, 10-90% RH non-condensing
Electrical	
Power Supply Input:	240V AC, 50/60Hz 230V @3.3A
Software	
Slicing Software:	Open Source
Supported File Types:	STL, OBJ, AMF
Supported OS:	WINDOWS/ IOS/ LINUX
Machine Code Type:	GCODE
Printer Controller	
User Interface:	7 to 10 inch Touch Screen
Network:	Ethernet: Ethernet 802.11b/g/n
WLAN:	IEEE802.11b/g:2412MHz to 2472 MHz
Resume Print after Power Outage:	Second Generation
Screen Resolution:	1024*600
Motion Controller:	ARM Cortex M7.400MHZ FPU
Logic Controller:	Freescale imx6, Quad core 1Ghz ARM processor
Memory:	1GB
Onboard Flash:	8GB
OS:	Embedded Linux
Ports:	Usb2.0*2, Ethernet*1

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Annexure - II

GENERAL TERMS & CONDITIONS

Sealed quotations are invited from the OEM or their authorized distributors.

- 1) Last Date of Submission of Sealed Bids: 28 February 2019 (Thursday) at 3:00 pm.
- 2) Date of Opening of Sealed Technical Bids: 01 March 2019 (Friday at 3:30 pm).
- 3) Payment Terms: After successful installation and commissioning, duly certified by the concerned principal investigator of the project. Vendor should submit the Bill along with Warranty Certificate duly sealed and signed.
- 4) Warranty and Guarantee: 2 (two) years on-site comprehensive OEM warranty from the date of successful installation and commissioning.
- 5) Service: Any service call must be attended within 24 (twenty-four) hours from the time of reporting the problem, i.e. within the next business day.
- 6) Delivery of the Store Item: The item should be delivered within 30 days from the date of issue of the purchase order.

7) Price: Price should be quoted including Installation and integration of the said equipment's. Price should be quoted only in Indian Rupees on free delivery at site. Tax component should be shown separately.

8) Conditional Offer will not be accepted. No advance is payable against supply of stores.

9) Period of Validity: Bids shall remain valid for acceptance, at least for a period of 90 days from the date of opening of the price bid.

10) Past Performance of the Vendors will be judged at the time of Technical Evaluation.

11) The Institute does not bind itself to offer any explanation to those bidders whose technical bids have not been found acceptable by the Evaluation Committee of the Institute.

12) Bidders should enclose the following documents: - Current GST certificate and PAN No.

(ii) Signed Tender document as a token of acceptance for the Terms & Conditions specified in various sections of the tender document.

(iii) Detailed un-priced bill of material.

13) The bid should also contain a signed "compliance certificate" duly signed by the bidder to the effect that items offered meet the tender specifications of the Institute.

14) All tenders are to be submitted over to the office of the Prof. Manoj Kumar Mondal, Rajendra Mishra School of Engineering Entrepreneurship, IIT Kharagpur, P.O.-Kharagpur Technology-721302 before the due date and time and acknowledgement to be obtained. In case due date happens to be a holiday, the tender will be accepted on the next working day.

15) 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.

16) IMPORTANT

(i) The Director, IIT Kharagpur, 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.

(ii) 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. Institute at its discretion also reserves the right to verify information submitted and inspect the manufacturer facilities, if required to confirm their capabilities.

(iii) In case of any dispute, the decision of the Director, IIT Kharagpur shall be final and binding on the bidders.

(iv) For any query pertaining to this Bid document, correspondence may be addressed to:

Manoj Kumar Mondal,
Rajendra Mishra School of Engineering Entrepreneurship
IIT Kharagpur,
P.O.-Kharagpur Technology-721302, Phone: 9434138989,
Email: manoj@see.iitkgp.ac.in

N.B.: Please Note that the Institute remains closed during Saturdays & Sundays.

ANNEXURE – III

PRICE BID FORMAT

Tender No. PMW/IIT/2019/01

Dated: 06 February 2019

Sl. No.	Description (Make, Model No. and Description)	Qty.	Unit Rate (INR)	GST (INR)	Total Amount (INR)
1					
2					
3					
Total Price (INR) inclusive of all taxes with 2 years onsite comprehensive warranty from the date of successful installation.					

Note: Above quoted price is including transportation, installation and other fitting Charges.

Signature of the Bidder with Seal