



CENTRE FOR NANO AND SOFT MATTER SCIENCES

Prof. U.R. Rao Road, Jalahalli, BENGALURU 560 013.

Autonomous Institution under the Dept. of Science & Technology, Govt. of India

REQUEST FOR QUOTATION

PI/000253/19-20

Date : 18.12.2019

The Centre invites Quotation for the following item.

SL No	Description of Item	Qty
1)	Automated Video measuring machine. (Technical specifications attached)	1 No.

NOTE:

- The sealed quotation should be addressed to the **Administration and Finance Officer, Centre for Nano and Soft Matter Sciences**, PB No: 1329, Prof. U.R Rao Road, Jalahalli, Bangalore-560013 before 31 December 2019
- Discount if any should be clearly mentioned.
- Delivery schedule, warranty details must be clearly indicated.
- Taxes & duties should be separately shown.
- Earnest Money Deposit of Rs.50,000/- is to be remitted through SBI Collect facility online and proof of remittance should be submitted along with the quotation.

Procedure for paying through SBI Collect :-

SBI Collect-Karnataka-Govt. Department-Centre for Nano and Soft Matter Sciences-MISC Fee-Tender Application Fee (Purpose).

The EMD will be refunded to unsuccessful bidders without any interest thereon. Overseas bidders may remit an equivalent EMD to the Centre's Bank A/C No.10838600274, Bank Name : State Bank of India, Jalahalli branch, IFSC Code : SBIN00963 SWIFT Code: SBININBB177.

- The quoted price should be valid for a minimum period of **3 months** from the date of quotation.
- Terms of payment:** The payment in INR shall be made through NEFT/RTGS after delivery and successful installation of the item
- Complete details such as the bank account number/IFSC/SWIFT/Bank Address, etc. should be provided along with the price bid.
- Warranty and replacement:** The Supplier shall ensure that the Items/Equipment supplied shall comply fully with the specifications laid down, for material workmanship and performance. The Warranty period should be specifically mentioned.
- The Centre reserves the right to accept or reject any quotation or part thereof without assigning any reasons.
- GST if applicable should be at concessional rates as applicable under provisions of OM No. 45/2017 relating to Scientific Research Institutes. Necessary Certificate will be issued at the time of placing order.

Yours sincerely

Sd/-

Administration and Finance Officer

Fully Automatic Video Measuring Machine

Important:

This is required from all the vendors for qualification of their offer to provide a compliance table for below mentioned points from 1 to 6 without fail.

1. Pre - qualification

- The supplier should be Original Equipment manufacturer (OEM) or their authorized dealer/distributor or Indian subsidiary of foreign principal. In case of authorized dealer/distributor or Indian subsidiary of foreign principal, valid authorization letter/documentary evidence to be submitted to certify the status.
- Supplier should have supplied and commissioned high precision non-contact based video measuring machine of same or higher sizes (250x150x150 in mm) and such equipment is presently working satisfactorily.
- The following information is to be submitted by the vendor where similar machines have been supplied. This is required from all the vendors for qualification of their offer.
 - Name and address of the customer / company where similar machine is installed.
 - Month & Year of commissioning
 - Name, designation, contact details & email id of the contact person of the customer.
- CeNS Bangalore reserves the right to verify the information and performance of referred machines as provided by vendor. In case the information provided by vendor is found to be false/incorrect or performance is not found to be satisfactory, the offer shall be rejected.

2. Fully Automatic System with specific design parameters

- 4-Axis (X, Y, Z and Zoom) Fully Automatic System with **auto run** control system and latest technology with multifunctional hand controller or joystick.
- Mode of Operation: Manual control with joystick operation and PC based CNC control with vector control.
- AC / DC stepper motor for X, Y & Z Axes.
- Should be capable of measuring Point, Circle, Angle, Distance, Cone, Sphere, Holes, Cavity etc.
- Motorised Variable zoom lens setup. Non fixed lens or fixed lenses in motorised turret.
- Fully automatic edge determination and self-optimizing edge analysis show details characteristic of each edge
- Cross roller rail guide / Air bearings / Linear Guide ways for axes
- Granite base or machine on granite table or very strong table.
- Metal scales for all linear axes for submicron precision

3. Technical Data

- X travel / Measuring Range: 250 mm or more
- Y travel / Measuring Range: 150 mm or more
- Z travel / Measuring Range: 150 mm or more
- It should be possible to measure at least 250mm (X) x 150mm (Y) x 150mm (Z)
- Resolution of X, Y & Z Axes: 0.1 micrometre or better
- Camera Type: High resolution CCD Camera with min 640 X 480-pixel array or better
- Lighting System: LED (Transistor-Transistor logic based) Lighting
 - LED segment should be programmable with intensity control through software
 - Running life OF LED > 10000 hrs.
 - Profile light should also be available under the working glass table.
- The accuracies & repeatabilities must be in ISO 10360-2 standard or equivalent standard.
- Linear Accuracy in X, Y Axes: within (2.5 + L/250) micrometre with camera or better

- Linear Accuracy in Z Axis: within $(2.5 + L/200)$ micrometre with camera or better
- Optical zoom system: 15:1 zoom lens or better
- Standard Optical Magnification: 0.5x to 5x or better
- Field of view: 8 mm or more at 30X on screen magnification
- Power supply compatible with 220V, Single Phase AC, 50 Hz or 415V, 3-Phase AC
- Conformity to safety requirement: CE certified.

4. Software:

- Offer licensed software of OEM with full features
- It must be possible to get free of cost updates for minimum of five years from the date of purchase order.
- All the features of the software like camera image of part, schematic view of part, programming, illumination & optics control zooming etc. should be available in the single screenshot of the monitor.
- Software must include:
 - Point edge detection tools.
 - Multiple point edge detection tools.
 - Feature constructions
 - Tool property editing
 - Lights, zoom & zoom editing
 - Feature summary display.
 - Data point display.
 - Feature status log display.
 - Image capture and export to JPG or BMP; export measured features to DXF and PDF format.
- Software should allow to set audio & visual warning for the operator for notification of the data input & error of feature being measured.
- Software should be able to measure all standard geometric elements.

5. Computer System (Dell/ HP only):

- Machine should be directly connected with the computer without any controller or any other electronics in between.
- The Operating System should consist of a Windows based (Windows 10 or better) Computer with the following minimum requirement.
- Intel i5 processor, 8 GB RAM (if required, additional RAM should be provided for proper performance of the system), 21" LCD colour monitor, 500 GB hard drive, Optical Mouse, Keyboard, USB ports, LAN port, Graphics Card
- 1 KVA Branded UPS must be provided with the machine.

6. Commissioning and Training of the machine at site:

- Commissioning of the machine to its desired capacity must be done by the supplier's engineer at CeNS-Arkavathi Campus Bangalore.
- Supplier's trainer/engineer must provide training (with regard to Programming and Operation) to at least 3 people for 3 working days CeNS-Arkavathi Campus Bangalore.
- To & fro travel of supplier's engineers for commissioning and training of machine will be borne by the vendor. Boarding, lodging & local transport of supplier's engineers for training of machine will be borne by the vendor.