GOVERNMENTENGINEERING COLLEGE,WAYANAD

Thalappuzha PO,Mananthavady, 670644, KERALA. Telephone: 04935-257320(Prl),04935-271261 (off),

E mail: [principal@gecwyd.ac.in](mailto:principal@gecwyd.ac.in)

**NOTICE INVITING TENDER**

No. D1/5363/17/GECWYDDated:23/03/2018

**Tender No.28/2017-18/GECWYD/S**

Superscription **:Purchaseand Installation of CNC MILL TRAINER with PC CONTROLLER for Mechanical Engineering Department**.

Last date and time of receipt of

Tenderon the website([www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in)) : 23**/04/20185 pm**

Date and time of opening of tender :26**/04/20183.pm**

Date up to which the rates are to be firm :31/12/2018

Bidding Fee : Rs.2600+18%GST 468/-Total=**3068/-**

EMD :Rs.17110/-

Address of the officer to whom hardcopyis to be send :THE PRINCIPAL,

GOVERNMENTENGINEERIN COLLEGE,

WAYANAD,THALAPPUZHA. P.O,

MANANTHAVADY PIN-670644

**LIST OF EQUIPMENT**

|  |  |
| --- | --- |
| **ITEM WITH SPECIFICATION** | **QTY/Nos** |
| Controller:PC Based System with PLC Control and Emulation of FANUC/SIEMENS/ HEIDEHEIN | 1No. |
| Traverse X, axis:300 mm X axis minimum  Traverse Y axis : 200 mm Y axis minimum  Traverse Z axis : 250 mm Z axis minimum |
| Table Size: Length x Width 600 x 225 mm minimum |
| Axis Control : Simultaneous Three axis control with Servo drives& servomotors and optional 4 th Axis Indexing Facility for future extension. |
| Maximum table load :60 Kg. min. |
| Tool changer: Automatic Tool Changer through Software Tool dimensions : As per ISO 30 standard |
| Automatic Tool Changer :Automatic 8 Station Tool Changer to be operated by Pneumatic Power pack (Compressor to be provided by manufacturer) |
| Main Spindle motor – Power : 2 Horse Power min. |
| Main Spindle motor – speed: 150 – 300 RPM |
| Resolution X axis : 1 micron  Y axis:1 micron  Z axis :1 micron |
| Rapid Traverse :**8,000 mm per minute** |
| Feed Rate:**1 to 2000 mm/min** |
| Cutting force X / Y / Z:900 / 900/ 1200 N |
| Position Accuracy X / Y / Z : 10 micron maximum |
| Lubrication system Main Spindle,Guide ways and other areas :Automatic Lubrication system to be operated through Software |
| Safety devices needed :Fully enclosed working area. Limit switches for X and Z axesEmergency Off |
| CONTROL: 24 V DC Signal voltage. With surge protection for Sudden ON / OFF of Electrical supply or Surge Voltage or Current. |
| Type of Control System: PLC Controller of Servodrives with Modbus communication facility to PC. Controller should be able to emulate Fanuc /Siemens/ Heidenhein Controllers. |
| COMPLETE TRAINING :MODULE It must have complete CAD-CAM Solution & DNC Facilitynamely1) 3D Model & 2D facility  2) CAD program from Industry should be machined on Trainer |
| CAD Software Linking facility : CAD Model linking facility from Autocad, Unigraphics, Proe, Catia should be able to IMPORT |
| Co-ordinate system :Cartesian Coordinate as well as Polar Co-ordinate programming facility to be provided.  \*Industrial GRADE MOP : Industrial Grade MOP for user Interface with Online RESET ,  \*AXIS DRIVES :Axis movements with Siemens / Fanuc / Mitsubishi Servomotors and Drives with Encoder above 10000 ppr |
| Main Supply :Main supply required (stabilized), 230 volts, 1 phase,50Hz and415 V 3 Ph |
| Main Spindle Motor :2HP |
| Main Spindle Controller: VFD Controller with Encoder Feeder for specific position Control. |
| Machine Link: RS-232 link/ RS-485 and USB cable from PC to machine and Ethernet Communication |
| Software :Programming and operating software and manuals withcourseware & project book |
| Coolant : Flood coolant system of capacity of 4 liters |
| Guard : Totally enclosed high visibility guard |
| SAFETY SYSTEM :Emergency stop button, Axes limit switches |
| Tool Path :Tool path graphics to verify program prior to machining |
| Job Scaling facility and canned cycles :Required |
| **Control software features:** Programming format :Programming format with Siemens and Fanuc and ISO codes,**PC Based Software** : Window Based PC Software which should work on Window –XPPlatform. It must provide online 3D Graphics.**Programming facilities** : MDI Programming facilities. **Interpolation** : Full circular and linear interpolation Programming units : Imperil / metric programming.**Subprogram**:Subprogram with repeat facility / program call Machine Stop :Manual and programmable machine stops |
| SOFTWARE REQUIREMENTS For Programming  Datum shift Program verification via dry run facility  Tool and program offset can be saved to the disc.  Program verification via dry run facility.  Full G and M code listing with context sensitive help.  Single block or auto execution,Block skip function,Block search facility. |
| 2D and 3D simulation: dynamic zooming, color coding of tools, different move types-rapid /linear/arc distinguished by colours, user defined tool shapes and sectional views. Comprehensive tool-path graphics including 2D &3D color simulation, tool-path plot and machining process simulation with tool animation   * Directory listing * Program merging facility * Automatic error checking with message * Continuous and incremental jog modes with variable feed rates. * Screen axis display for distance to go values. * Full edit mode allowing alters, delete, insert. * Cycle start/hold * Programmable dwell over travel limits and emergency stop * Programmable spindle speed: 150-3000rpm * Programmable federate:0-600mm/min * Constant surface feed * Simultaneous controlled X and Z axes * Diameter / radius programming * Internal/external screw cutting * Roughing and finishing cycles * Canned turning cycles * Tool offsets for 16 tools * Incremental tool wear compensation * Tool nose radius compensation * Interface with CAD/CAM software * Built in virtual micrometer   Password protected machine parameters |
| **PC Configuration**: Multi Media PC - Processor: Intel Duel Core 3 GHz, with HT  technology, system bus 2GB FSB   * Cache: Intel Processor 2.8 to 3.6 with 1MB L2 cache * HDD: Seagate 400GB, 7200 RPM * Graphic card * Modbus Communication Facility * Graphics: On board graphics controller * Ports: 2USB 2.0 ports (one in Front panel of the cabinet), serial –one. * parallel – one * Monitor: 15” color monitor * Mouse: Optical scroll mouse Wireless * Keyboard: Wireless * DRIVE CD ROM: 52X32X52X * Ether-Net card: Integrated * Drives for all the necessary hardware |
| **CAD-CAM Software** CAD: Model import facility and Automatic Code generation  software to be provided alongwithmachine.Modeling and code Generation software has to be provided |
| warrantee: **2 years** |

**SPECIAL TERMS & CONDITIONS:**

* The Equipment should be delivered at GEC Wayanad Manufacturing Technology Lab I (New mechanical workshop)
* The quoted rates should be inclusive of all taxes and other charges like,**freight charges, loading, unloading, erection and installation charges at GEC Wayanad.**
* The tenderer should send along with his hard copy of documents an preliminary agreement executedand signed in **Kerala Stamp Paper value of Rs.200**/-withindue date.

**\*PrintedLabmanualwithfigures&servicemanualshouldbesuppliedforeachitem.**

\*Pyment:100%after successful installation & demonstration

Price Validity: Bids shall remain valid for 180 days after the date of bid opening. A bid valid for a shorter period may be REJECTED by the purchaser as non-responsive.

\*Warranty: **Two year** from the date of supply against any manufacturing defects.

\*Time Limit: The equipment should be delivered within 90 days from the date of issue of the purchase order. Brand, Model and specification of Peripherals should be clearly mentioned.

\* SSI/SME units those are availing Tender fee/EMD Exemption should produce certificate showing that the items/products quoted are manufactured by them. Otherwise their offer will be rejected.

\*Replacement under warranty clause shall be made by the Vendor free of all charges at site including freight, insurance, cost of works and other incidental charges.

\*The successful bidder should furnish an Agreement and Security Deposit in the form of Bank Guarantee/DD from a Nationalized Bank for an amount @5% of the order value addressed to “The Principal, Govt. Engineering College, Wayanad”.

**\*The right to cancel this Tender without further notice will rest to the Undersigned**.

\*Safe Delivery: All aspects of safe delivery shall be the exclusive responsibility of the vendor. At the destination site, the package will be opened only in the presence of the purchaser and vendors representative. The intact condition of the package and the seal/indicators for not being tempered with shall from the basis for certifying the receipt in good condition.

\*Insurance: The supplier is to establish “All risk transit insurance" coverage until door delivery at GEC Wayanad.

\*Penalty for delay in delivery: The date of delivery should be strictly adhered to otherwise: the GEC Wayanad reserves the right not to accept delivery in part or full

\*Conditional tenders not acceptable: All the terms and conditions mentioned herein must be strictly adhered to by the vendors. Conditional tenders shall not be accepted on any ground and shall be rejected straightway. Conditions mentioned in the tender bids submitted by vendors will not be binding on GEC Wayanad.

* The vendor should **supply product brochure /catalog,Model No along with actual photographs with their firm’s address and registration details at the time of tender submission,otherwise the tender will be rejected without further Notice.**
* **If required a pre inspection of the machine will be conducted before finalizing the purchase order with in the stipulated date mentioned by GEC Wayanad.**

A**fter e-tendering, The hard copy of the all documents, such as agreement, Brochure etc. are should be submittedbeforetheopeningdatesuperscribed the tender Number with due date and addressed to the Principal, Govt. Engineering College, Wayanad.**Dateofopeningoftender:Incasetheproposeddatedeclaredasholiday,the tenderwillbeopenedonthe nextworkingday.

NB: The Tender procedure will be made as per Rulesmentionedinthe RevisedStorePurchaseManual.ThebiddersshouldparticipatethistenderthroughE-TenderingSystem.

**Tender costandEMDshouldbesubmittedonlythrough online.**

Sd/-

Dr.ABDUL HAMEED.K.M

PRINCIPAL