Indian Institute of Technology, Delhi

Notice Inviting Quotation

Date: 5th Feb, 2013

Sealed quotations are invited for:

1. CNC Lathe Machine for Training & Production
2. CNC Milling Machine for Training & Production

The quotations should be submitted in a sealed cover (separate bids: technical and commercial) to Prof. Naresh Bhatnagar, Head, Central workshop, Indian Institute of Technology Delhi, Hauz Khas, New Delhi 110016 on or before 27/02/13 (Wednesday). Late submission will not be considered.

The sealed Quotations are to be submitted in one envelope having two separate envelopes for:

A- Technical Quote (Technical Specifications only)
B- Financial Quote (Technical & Financial)

Both the envelopes A & B should be enclosed in an outer envelope, which should be sealed and addressed to, clearly mentioned on top right of the envelope “CNC Lathe and Milling Machines”.

Institute reserves the right to accept or reject any of the offers without assigning any reasons. The detailed specification of each individual machine is given below:

1. CNC LATHE MACHINE

<table>
<thead>
<tr>
<th>Minimum Required Technical Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>QTY. 1No</td>
</tr>
</tbody>
</table>

CNC machine suitable for 220 volts single phase AC 50 cycles power supply conforming to the following specifications.

1. Distance between Centers: 200 – 250mm
2. Swing Over Bed: up to 180mm
3. Traverse X,Z: 50 - 60 mm, 150-175mm
4. Turning Diameter: up to 75mm
5. Turning length: up to 120mm
6. Spindle bore: max. 21 mm
<table>
<thead>
<tr>
<th>No.</th>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Spindle Speed Range</td>
<td>infinitely variable 150 - 4000 rpm</td>
</tr>
<tr>
<td>8</td>
<td>Tail stock: Quill stroke / Quill Diameter</td>
<td>up to 120mm / max. 35mm</td>
</tr>
<tr>
<td>9</td>
<td>Rapid traverse</td>
<td>min. 5m/min</td>
</tr>
<tr>
<td>10</td>
<td>Working Feed</td>
<td>0-5 m/min</td>
</tr>
<tr>
<td>11</td>
<td>Tool turret</td>
<td>Automatic</td>
</tr>
<tr>
<td>12</td>
<td>Number of Tool holders</td>
<td>min. 8</td>
</tr>
<tr>
<td>13</td>
<td>Position variation X / Z</td>
<td>max. 10/10 microns</td>
</tr>
<tr>
<td>14</td>
<td>Lubrication Systems</td>
<td>Life time lubrication</td>
</tr>
<tr>
<td></td>
<td>Main spindle</td>
<td>Manual / Automatic oil or Grease lubrication</td>
</tr>
<tr>
<td></td>
<td>Guide ways and other areas</td>
<td>Fully enclosed working area and limit switches for axis over travel and door and emergency off switch.</td>
</tr>
<tr>
<td>15</td>
<td>Safety</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Controls</td>
<td>PC-controlled 2-axis Table top trainer &amp; semi industrial CNC Lathe machine with following interchangeable control systems.</td>
</tr>
<tr>
<td></td>
<td>GE FANUC 21 TURNING</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SINUMERIK 840D TURNING</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Machine complete with fully enclosed working area, safety units acc. to CE-regulations, 8-station tool turret, manual tailstock, central lubrication, machine lamp, electrical and mechanical preparation for automation,</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Functions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diagnostics, data input / output, measuring of tools and positions, Work offset , Tool offsets, skipped blocks, dry run , setting data , graphic simulation in 2D &amp; 3D graphics, detailed error massage about Machine and programming</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Optional</td>
<td>OFFLINE PROGRAMING STATION FOR ABOVE PC CONTROLED SOFTWARE 30 USERS Pack</td>
</tr>
<tr>
<td>2</td>
<td>CNC MILLING MACHINE</td>
<td>QTY. 1No</td>
</tr>
</tbody>
</table>

**Minimum Required Technical Specification**

<table>
<thead>
<tr>
<th>No.</th>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Traverse X,Y,Z</td>
<td>min. 200 / 150 / 250 mm</td>
</tr>
<tr>
<td>2</td>
<td>Distance Spindle to Table</td>
<td>min.95 – max.250 mm</td>
</tr>
<tr>
<td>3</td>
<td>Clamping surface : Length x Width</td>
<td>min.400 x 100 mm</td>
</tr>
<tr>
<td>4</td>
<td>Tool Changer</td>
<td>Automatic (ATC)</td>
</tr>
</tbody>
</table>
5. Numbers of tools
   min. 10

6. Tool clamping device
   Automatic

7. Main Drive Motor - power
   min. 1.0 KW

8. Spindle Range
   150 – 5000 RPM

9. Spindle Torque
   min. 4.0 Nm

10. Rapid traverse X/Y/Z
    5 m/min

11. Work Feed X/Y/Z
    0-5m / min

12. Position variation X / Y / Z
    max. 10/10/10 microns

13. Lubrication System
    Main spindle
    Life time lubrication
    Guide ways and other areas
    Manual / Automatic oil or
    Grease lubrication

14. SAFETY DEVICES: Fully enclosed working area and limit switches for all
    Axes over-travel and door and emergency off switch.

15. CONTROL Type
    PC-controlled 3-axis (Optional 4th
    Axis) Table top trainer & semi
    industrial CNC milling machine with
    following interchangeable control
    systems

    **GE FANUC 21 Milling**
    **SINUMERIK 840D Milling**

    Machine complete with fully enclosed working area, safety units according to
    CE-regulations, 10-station tool drum, central lubrication, machine lamp, electrical
    and mechanical preparation for automation to 4 Axis machine

16. Functions
    Diagnostics, data input / output, measuring of tools
    and positions minimum 4 Work offset, 32 Tool
    offset, skipped blocks, dry run, setting data, graphic
    simulation in 2D & 3D graphics, detailed error
    Message about Machine and programming

17. NC Dividing Head with 3 Jaw Chuck & Tailstock

    Resolution
    Infinitely variable
    speed
    min. 8 rpm
    torque
    min. 45 Nm
    Spindle height
    at least 50 mm

18. OFFLINE PROGRAMING STATION
    FOR ABOVE PC CONTROLED SOFTWARE
    **30 USERS Pack**
**Terms and Conditions**

**Envelope A:** Technical Quote: The following details are to be enclosed (Mention clearly on this envelope – Technical Quote)

1. Letter from the manufacturer specifically to quote for this tender is to be attached for the authenticity of dealership/agency and the dealer should be an authorized service provider.

2. Technical brochures mentioning all details with complete address of the principals.

3. A compliance statement for required specifications should be attached.

4. Firm MUST provide a compliance statement vis-à-vis specifications in a “tabular form” clearly stating the compliance and giving justification, if any supported by technical literature with clear reference of page number, paragraph or lines. This statement must be signed, with the company seal, by the tenderer for its authenticity and acceptance that any incorrect or ambiguous information found submitted will result in disqualification of the tender. The quotation should be complete in all respects. (as per IIT-Delhi rules).

5. Any optional equipment / accessory advised to be included separately.

6. a) List and addresses of organizations [in India and abroad – with contact landline numbers] where the equipment has been supplied in last 3 years. b) Address in India where a live demonstration of the instrument can be arranged, if possible.

7. a) Details of similar equipment supplied to preferably Indian Institute of Technology/ National Institute of Technology/Indian Institute of Science, India specifying the Department/centre/lab to which the equipment was supplied, with references. b) Mention if the equipment is being maintained by your organization. Address of the technical office, in India, with telephone and FAX numbers. Please clarify the type of support available in India.

8. If quote is for imported equipment, Sole Agency-ship certificate on the letterhead of the principal company with current dates, if quotation is from an Indian Agent.

9. In the case the items are proprietary products of the company, a proprietary item certificate stating the same may be provided.

10. Specifications form should be similar to the given major specifications.
**Envelope B:** Financial Quote: The following details are to be enclosed/ ensured. (Mention clearly on this envelope – Financial Quote)

1. The quotations for the equipment in foreign exchange, if it is to be imported. The cost of spares and optional equipment are to be quoted separately. The cost should be based on FOB, Factory. If equipment is indigenous, the quote should be in INR.

2. Taxes, terms and conditions should be clearly mentioned.

3. Institute makes payment after delivery and successful installation. The payment is by RTGS for which NEFT form need to be duly filled and complied. In case the payment terms are different, it should be mentioned clearly. If equipment is to be imported, the address of the company in whose name the LC is to be opened should be stated.

4. Payment terms and conditions should be clearly mentioned. No advance payment is given by IIT Delhi for capital equipments.

5. Vendor should get a fresh certificate directly from their product principal’s clearly mentioning about warranty for three years of the equipment to be delivered from the date of installation.

6. The details of the AMC after the warranty period should be clearly mentioned.

7. Cost for Installation and training at site, if needed, to be provided.

8. Validity of the quotation should be at least four months. Vendors will do the installation and demonstration of the equipment at IIT Delhi premises without any additional charges.

9. The delivery period to be clearly specified and should be at the earliest possible.

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**Prof. Naresh Bhatnagar**

Head, Central Workshop

IIT Delhi - 110016