

DETAILS OF THE MACHINE

Name of Machine	Specification	A/U	Qty																																																																																																												
(a)	(b)	(c)	(d)																																																																																																												
CNC Internal Grinding Machine	CNC Internal Grinding Machine with all standard and additional accessories as per specification below :	No	01 (One)																																																																																																												
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Work head spindle speed</td> <td data-bbox="799 535 1374 568">: Min 800 rpm</td> </tr> <tr> <td data-bbox="336 568 400 602"></td> <td data-bbox="400 568 799 602">(1) Longitudinal Travel</td> <td data-bbox="799 568 1374 602">: Min 300 mm</td> </tr> <tr> <td data-bbox="336 602 400 636"></td> <td data-bbox="400 602 799 636">(2) Resolution</td> <td data-bbox="799 602 1374 636">: 0.001~0.0015 mm</td> </tr> <tr> <td data-bbox="336 636 400 669"></td> <td data-bbox="400 636 799 669">(3) Speed</td> <td data-bbox="799 636 1374 669">: Min 0.001 mm/min – Max not less than 10000 mm/min</td> </tr> <tr> <td data-bbox="336 669 400 703"></td> <td colspan="2" data-bbox="400 669 1374 703">f.</td> </tr> <tr> <td data-bbox="336 703 400 736"></td> <td data-bbox="400 703 799 736">(1) Transverse Travel</td> <td data-bbox="799 703 1374 736">: Min 300 mm</td> </tr> <tr> <td data-bbox="336 736 400 770"></td> <td data-bbox="400 736 799 770">(2) Resolution</td> <td data-bbox="799 736 1374 770">: 0.001~0.0015 m</td> </tr> <tr> <td data-bbox="336 770 400 804"></td> <td data-bbox="400 770 799 804">(3) Speed</td> <td data-bbox="799 770 1374 804">: Min 0.001 mm/min – Max not less than 10000 mm/min</td> </tr> <tr> <td data-bbox="336 804 400 837"></td> <td data-bbox="400 804 799 837">g. External grinding length</td> <td data-bbox="799 804 1374 837">: Min 80 mm</td> </tr> <tr> <td data-bbox="336 837 400 871"></td> <td data-bbox="400 837 799 871">h. Size of External grinding wheel</td> <td data-bbox="799 837 1374 871">: To be mentioned</td> </tr> <tr> <td data-bbox="336 871 400 904"></td> <td data-bbox="400 871 799 904">j. Rotation speed of External grinding wheel</td> <td data-bbox="799 871 1374 904">: Min 3000 rpm</td> </tr> <tr> <td data-bbox="336 904 400 938"></td> <td colspan="2" data-bbox="400 904 1374 938">k. B axis</td> </tr> <tr> <td data-bbox="336 938 400 972"></td> <td data-bbox="400 938 799 972">(1) Swivel range</td> <td data-bbox="799 938 1374 972">: + 25°~ + 30°, - 20°~ -25°</td> </tr> <tr> <td data-bbox="336 972 400 1005"></td> <td data-bbox="400 972 799 1005">(2) Resolution</td> <td data-bbox="799 972 1374 1005">: 0.001~0.0015 mm</td> </tr> <tr> <td data-bbox="336 1005 400 1039"></td> <td colspan="2" data-bbox="400 1005 1374 1039">l. C axis</td> </tr> <tr> <td data-bbox="336 1039 400 1072"></td> <td data-bbox="400 1039 799 1072">(1) Rotation angle</td> <td data-bbox="799 1039 1374 1072">: 360°</td> </tr> <tr> <td data-bbox="336 1072 400 1106"></td> <td data-bbox="400 1072 799 1106">(2) Resolution</td> <td data-bbox="799 1072 1374 1106">: 0.0001°~ 0.00015°</td> </tr> <tr> <td data-bbox="336 1106 400 1140"></td> <td data-bbox="400 1106 799 1140">m. Control system</td> <td data-bbox="799 1106 1374 1140">: FANUC / SIEMENS / HAAS</td> </tr> <tr> <td data-bbox="336 1140 400 1173"></td> <td data-bbox="400 1140 799 1173">n. Software</td> <td data-bbox="799 1140 1374 1173">: Compatible CAD-CAM software to be supplied along with the machine</td> </tr> <tr> <td data-bbox="336 1173 400 1207"></td> <td data-bbox="400 1173 799 1207">p. Power supply</td> <td data-bbox="799 1173 1374 1207">: 380~400v, 3 phase, 50Hz</td> </tr> <tr> <td data-bbox="336 1207 400 1240"></td> <td colspan="2" data-bbox="400 1207 1374 1240">q. Spare Grinding wheel and accessories to be supplied:</td> </tr> <tr> <td data-bbox="336 1240 400 1274"></td> <td data-bbox="400 1240 799 1274">(1) Internal grinding wheel (CBN)</td> <td data-bbox="799 1240 1374 1274">: Dia 3,4,5,6,8,10,12,14,16,18,20mm, Qty: 50Nos each</td> </tr> <tr> <td data-bbox="336 1274 400 1308"></td> <td data-bbox="400 1274 799 1308">(2) Internal grinding wheel (Diamond)</td> <td data-bbox="799 1274 1374 1308">: Dia 3,4,5,6,8,10mm Qty: 50Nos each</td> </tr> <tr> <td data-bbox="336 1308 400 1341"></td> <td data-bbox="400 1308 799 1341">(3) External grinding wheel (CBN)</td> <td data-bbox="799 1308 1374 1341">: Qty: 05 Nos.</td> </tr> <tr> <td data-bbox="336 1341 400 1375"></td> <td data-bbox="400 1341 799 1375">(4) External grinding wheel (Diamond)</td> <td data-bbox="799 1341 1374 1375">: Qty: 05 Nos.</td> </tr> <tr> <td data-bbox="336 1375 400 1408"></td> <td data-bbox="400 1375 799 1408">(5) Laptop (for CAD-CAM programming)</td> <td data-bbox="799 1375 1374 1408">: Qty: 01 No.</td> </tr> <tr> <td data-bbox="336 1408 400 1442"></td> <td data-bbox="400 1408 799 1442">(6) Internal grinding wheel arbor</td> <td data-bbox="799 1408 1374 1442">: Qty: 04 Nos.(for each wheel size)</td> </tr> <tr> <td data-bbox="336 1442 400 1476"></td> <td data-bbox="400 1442 799 1476">(7) External grinding wheel flange</td> <td data-bbox="799 1442 1374 1476">: Qty: 01 No</td> </tr> <tr> <td data-bbox="336 1476 400 1509"></td> <td data-bbox="400 1476 799 1509">r. Machine weight</td> <td data-bbox="799 1476 1374 1509">: Min 1500 kg</td> </tr> <tr> <td data-bbox="336 1509 400 1543"></td> <td colspan="2" data-bbox="400 1509 1374 1543">2. Conditions:</td> </tr> <tr> <td data-bbox="336 1543 400 2069"></td> <td colspan="2" data-bbox="400 1543 1374 2069"> <p>a. All standard attachment and accessories like Wheel dressing unit, Tailstock (if required), must be supplied with the machine to manufacture different types of Carbide and steel die, punch, sleeve etc.</p> <p>b. 01 Set of required attachment and accessories like 3 Jaw chuck, Jaw (02 sets), Wheel dresser (50 Nos), Tool box etc. must be supplied with the machine to perform the job as per sample drawing attached.</p> </td> </tr> </table>	1.	Specification :			a. Hole diameter of grinding	: Min Φ 5 mm – Max not less than Φ 60 mm		b. Internal grinding length	: Min 120 mm		c. Rotation speed of Internal grinding wheel	: Min 10000 rpm		d. Work piece diameter	: Min Φ 10mm – Max not less than Φ 200 mm		e. 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	<p>c. All additional accessories, attachments, tools & fixture required to perform the above mentioned job to be supplied along with the machine and mentioned with price in the financial offer.</p> <p>d. List of spare parts required for five (05) years operation must be supplied with price in the financial offer.</p> <p>e. All optional items with price must be mentioned in the financial offer which will be certified by the manufacturer of the machine (not by the local agent).</p> <p>f. Foreign Training: Machine operation with maintenance training for 03 BOF persons for 05 working days (excluding journey period) to be provided at machine manufacturer site. Air ticket & Pocket money will be borne by BOF. Others costs like Tuition fee for training, food, accommodation, all internal travel & medical (if needed) costs to be provided by supplier. Supplier must submit foreign training plan along with the offer.</p> <p>g. Pre-shipment Inspection (PSI):</p> <p>(i) PSI of the machine will be carried out by 02 BOF persons for 04 working days (excluding journey period). All cost of the PSI to be borne by BOF.</p> <p>(ii) Supplier must submit details plan of PSI (Modus Operandi).</p> <p>(iii) Supplier must also mention PSI cost to be borne by them at their end.</p> <p>h. Machine installation, commissioning & trial run must be done by the supplier within 30 days from the date of arrival of the machines at BOF. Operation, Repair & Maintenance training (Local Training) of BOF personnel for at least 21 working days. Following information must be given as under :</p> <table border="1" data-bbox="327 927 1391 1541"> <thead> <tr> <th data-bbox="327 927 391 981">Ser.</th> <th data-bbox="391 927 545 981">Training</th> <th data-bbox="545 927 1248 981">Details</th> <th data-bbox="1248 927 1391 981">Supplier's Opinion</th> </tr> </thead> <tbody> <tr> <td data-bbox="327 981 391 1541">a.</td> <td data-bbox="391 981 545 1541">Local Training after machine installation</td> <td data-bbox="545 981 1248 1541"> Trainer Type (Local/ Foreign) Number of Trainer <u>Training</u> a. Machine Operators Training: 11 Working Days b. Machine maintenance, trouble shooting and repair training : 10 working days Topics: (i) Details operation of electrical, electronics, pneumatic system, hydraulic system and mechanical system with diagrams in details. (ii) Control system: program loading and unloading, debugging, editing and servo drive and servo motors interconnection and parameter setting in details. (iii) Troubleshooting: Artificial problems to be created by removing sensors and changing the parameters of servo drive and servo motors then faults diagnosis and repair procedures. (iv) Safety procedures. </td> <td data-bbox="1248 981 1391 1541"></td> </tr> </tbody> </table> <p>j. Supplier must submit Local Training plan along with the offer.</p> <p>k. 1 x User/ programming manual in English (Hard & Soft copy) must be supplied with the machine.</p> <p>l. 1 x Operation, 1 x Maintenance and Repair manual (Hard & Soft copy) with parts catalogue and circuit diagram of electrical devices in English to be supplied with the machine. These books must contain the following topics/items:</p> <p>(1) Operation manual: Hydraulic, Pneumatic, Electrical, Electronic and Mechanical operational circuit and component diagrams with their detail working principles & description. Simulation/Animation of major items working/operation to be included in the soft copy.</p> <p>(2) Maintenance and Repair Manual: Detail troubleshooting & repair procedure as well as maintenance and safety system.</p> <p>m. All necessary Software to handle & maintain the machine must be supplied along with the machine.</p> <p>n. Warranty for 01 (one) year after acceptance should be provided by the manufacturer.</p>	Ser.	Training	Details	Supplier's Opinion	a.	Local Training after machine installation	Trainer Type (Local/ Foreign) Number of Trainer <u>Training</u> a. Machine Operators Training: 11 Working Days b. Machine maintenance, trouble shooting and repair training : 10 working days Topics: (i) Details operation of electrical, electronics, pneumatic system, hydraulic system and mechanical system with diagrams in details. (ii) Control system: program loading and unloading, debugging, editing and servo drive and servo motors interconnection and parameter setting in details. (iii) Troubleshooting: Artificial problems to be created by removing sensors and changing the parameters of servo drive and servo motors then faults diagnosis and repair procedures. (iv) Safety procedures.			
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	<p>p. Bidder should submit original Leaflet/ Brochure along with the offer.</p> <p>q. The service support with spares for minimum 10 years to be provided by the manufacturer.</p> <p>r. Standard Lubricating & Lighting system should be provided with the machine.</p> <p>s. PCB (Printed Circuit Board) must be installed with the M/C for (On line) repair facilities and incorporate with the Enterprise Resource Planning System of BOF.</p> <p>t. Any other points related to do the required job should be mentioned in the offer.</p> <table border="1" data-bbox="248 461 1406 589"> <tr> <td data-bbox="248 461 312 495">3.</td> <td data-bbox="312 461 991 495">Country of Origin</td> <td data-bbox="991 461 1406 495">: Group A</td> </tr> <tr> <td data-bbox="248 495 312 528">4.</td> <td data-bbox="312 495 991 528">Country of Manufacture, Assembly</td> <td data-bbox="991 495 1406 528">: Group A</td> </tr> <tr> <td data-bbox="248 528 312 562">5.</td> <td data-bbox="312 528 991 562">Country of Main Component/ Assembly of the Machine</td> <td data-bbox="991 528 1406 562">: Group A</td> </tr> <tr> <td data-bbox="248 562 312 589">6.</td> <td data-bbox="312 562 991 589">Country of Shipment</td> <td data-bbox="991 562 1406 589">: Group A</td> </tr> </table>	3.	Country of Origin	: Group A	4.	Country of Manufacture, Assembly	: Group A	5.	Country of Main Component/ Assembly of the Machine	: Group A	6.	Country of Shipment	: Group A		
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Terms & Conditions

Supplier must mention their compliance on the following mentioned points :

1. A principal/manufacturer can submit **only one offer through one local agent** for any individual item. Offers through multiple local agents by same principle/manufacturer will be **treated as rejected**.
2. To ensure unhindered LC handling the principal must provide a certificate to confirm that their LC operating bank has RMA (Relationship Management Agreement) with the local Banks of Bangladesh.
3. Supplier must **clearly mention** (in the technical offer) that as principal/manufacturer they poses necessary **export permit** from the concern ministry or any other authority of their country. They must also submit a certificate in this regards as per the attached specimen format at Annex F.
4. Before signing the contract, Performance Guarantee @ 10% of total LC value is to be submitted by the Principal in favour of Commandant, Bangladesh Ordnance Factories, Gazipur Cantonment, Gazipur through any scheduled Bank located in Bangladesh (As per the format at Annex D).
5. A separate **certificate should be provided** by the principal **originally signed** (Computerized or digitally edited signature will not be accepted) stating that they are aware of the requirement of the PG and if the contract is awarded they will be bound to provide the PG as per the format at Annex E.
6. The stores should be supplied to BOF at **supplier's cost**.
7. On arrival of the stores at BOF, the supplier must complete installation, commissioning, trial run & trial production within 01(one) month (from the date of entry at BOF). Otherwise, penalty will be imposed at the rate of 2% but not less than 1% and will not exceed 10% of the total CFR/LC vale (As applicable).
8. If the supplier fails to deliver the stores within the stipulated period, the followings will be applicable:
 - a. Cancel the contract and/or,
 - b. Decision at the discretion of BOF.
9. Inspectorate is the authority in all matters pertaining to Inspection. Any verdict by the inspectors regarding rejection, acceptance, and /or deviation of machine involving price reduction will be treated as final and will not be subject to arbitration.
10. The Supplier must submit the following **attested documents** with the schedule :
 - a. **Trade License**
 - b. **Tin Certificate**
 - c. **Up to date VAT Registration certificate.**