

DETAILS OF THE MACHINE

Sl. No	Specification	A/U	Qty
(a)	(b)	(c)	(d)
	CNC Turning Center with Counter Spindle Driven Tools with all standard and additional accessories as per specification below :	No	01
1.	<p><u>Specification:</u></p> <p>a. <u>Work area :</u></p> <p>(1) Swing Over Bed : To be mentioned</p> <p>(2) Swing over cross slide : To be mentioned</p> <p>(3) Distance between Spindle Noses : To be mentioned</p> <p>(4) Maximum Turning Diameter : $\geq 300-500$</p> <p>(5) Max. Part length : $\geq 500-800$</p> <p>b. <u>Travel :</u></p> <p>(1) Traverse Path, X- Axis : To be mentioned</p> <p>(2) Traverse Path, Z1/Z2 Axis : To be mentioned</p> <p>c. <u>Main Spindle(C1 Axis) with indexing facilities :</u></p> <p>(1) Max Speed range : $\geq 3000-5000$ infinite adjustable speed.</p> <p>(2) Minimum indexing in degree : To be mentioned</p> <p>(3) Axis for indexing facilities : To be mentioned</p> <p>(4) Spindle nose : A2 - 6 or To be mentioned.</p> <p>(5) Spindle Bore : Minimum 50 or to be mentioned</p> <p>d. <u>Counter Spindle(C2 Axis) with indexing facilities</u></p> <p>(1) Max Speed range : $\geq 3000-5000$ with infinite adjustable speed.</p> <p>(2) Minimum indexing in degree : To be mentioned.</p> <p>(3) Axis for indexing facilities : To be mentioned.</p> <p>(4) Spindle nose : A2 - 6 or To be mentioned.</p> <p>e. <u>BMT Tool Turret :</u></p> <p>(1) Number of tools station (minimum) : 12</p> <p>(2) Turret Model : To be mentioned</p> <p>(3) Tool cross - section for square - Shank tools : 20 x 20 mm or 25 x 25 mm</p> <p>(4) Shank diameter for boring bars : To be mentioned.</p> <p>f. <u>Driven tools:</u></p> <p>(1) Speed range : Maximum $\geq 2500- 5000$, Infinite speed adjustable</p> <p>(2) Driven tools (minimum) : 12</p> <p>g. <u>Feed Drives:</u></p> <p>(1) Rapid Speed, X-Axis (minimum) : To be mentioned</p> <p>(2) Rapid Speed, Z1/Z2 Axis (minimum) : To be mentioned</p> <p>h. <u>Standard items/Equipment:</u></p> <p>(1) Main & Counter Spindle tool : Standard</p> <p>(2) Turret : Standard</p> <p>(3) Driven tool for milling & Drilling Operation</p> <p>(4) BMT Tool Holder Package according to turret must be supplied with the machine.</p> <p>(5) Tool pre-setter or tool Measurement probe : Standard</p> <p>(6) <u>Bar feeder</u> : Rod diameter Maximum 40 mm and rod length 800 mm or to be mentioned</p> <p>j. <u>List of Optional items and accessories to be mentioned separately with price:</u></p> <p>(1) <u>Tools/ Insert:</u></p> <p>(a) ROUHLING HOLDER- MWLNL 2525 M 06 or equivalent - 02 Nos.</p>		

RESTRICTED

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(a)	(b)	(c)	(d)
	(b) ROUGHLING INSERT- WNMG 060408 PM or equivalent - 200 Nos. (c) PARTING HOLDER- LF 123G 20-2525 B or equivalent - 02 Nos. (d) CUT-OFF HOLDER- N 123G 55-25A2 or equivalent - 02 Nos. (e) PARTING INSERT- L123G 2-0300-0502-CM 1125 (length L1=19.68 mm) or equivalent - 100 Nos. (f) EXTERNAL THREADING HOLDER- 266 RFG 2525-16 or equivalent - 02 Nos. (g) EXTERNAL THREADING HOLDER- 266 LFG 2525-16 or equivalent - 02 Nos. (h) THREADING INSERT- 266 LL-16VM 01A002M 1125 or equivalent - 200 Nos.		
	(2) For main spindle chuck's jaw : 3 Jaw hydraulic Chuck dia 200-250 mm hard and soft Jaw : 02 Set Each		
	(3) For counter spindle chuck's jaw : 3 Jaw hydraulic Chuck dia 160- 200 mm with hard jaw : 02 Set		
	(4) Electronic Hand wheel : 01 Set		
	(5) Air Condition unit for electrical cabinet : 01 Set		
	(6) Machine Status Lamp : 01 Set		
2.	Country of manufacture of Main/major components : Group A (Spindle Motor, Servo Motor, Servo Control Unit, Lead Screw, Control circuit and fabrication)		
3.	Control system : Updated FANUC/Siemens840D/HAAS with manual Guide-i or equivalent.		
4.	Country of Origin : Group A		
5.	Country of Shipment : Group A		
6.	Country of manufacturer : Group A		
7.	Spare Parts : For 5 years to be mentioned separately		
8.	Terms and Conditions:		
	a. All axis must be integral to the machine, no attachment to be used as any axis.		
	b. The Machine should be Capable to perform following operations: (1) Turning, (2) Drilling and radial drilling, (3) Boring, (4) Threading, (5) Reaming etc. & Also be capable of complete Machining with Drive Tools.		
	c. All accessories, attachments, tools, cutter, fixture etc. required to perform the above mentioned job to be supplied and mentioned with price in offer.		
	d. Must have Automatic Chip Removing System.		
	e. Must have Programmable Automatic door opening and closing system.		
	f. Standard cooling, lighting, lubricating & control system (Software & Hardware) should be provided with machine.		
	g. 2 x operation/programming manual in English (Hard & Soft copy) must be supplied with the machine. 1 Set of all documents must be loaded in CNC system for easy maintenance.		
	h. 2 x maintenance/repair manual (Hard & Soft copy) with mechanical spare parts list along with circuit diagram and troubleshooting with remedy in English must be supplied with the machine. 1 Set of all documents must be loaded in CNC system for easy maintenance.		
	j. The supplier should give service support for ten years after installation of machine.		
	k. Pre-Shipment Inspection : (1) Pre-Shipment Inspection (PSI) will be carried out by BOF at the discretion of BOF authority. The team may be comprised of 02 (two) BOF personnel for a period of 03 (three) working days excluding journey period. (2) Supplier must submit detail plan of PSI (Modus Operandi). (3) Supplier must also mention PSI cost to be borne by them at their end.		
	l. Machine installation, trial run and operational with maintenance, training is to be provided by the certified engineers' of machine manufacturer at BOF site within 30 days after receiving Machine by BOF.		

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	<p>m. Local Training : Machine installation, trial run and operational with maintenance, training is to be provided by the certified engineers' of machine manufacturer at BOF site. Duration of training should be at least 10 working days. Following information must be given as under :</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">Ser</th> <th style="width: 20%;">Training</th> <th style="width: 55%;">Details</th> <th style="width: 20%;">Supplier's Opinion</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">(1)</td> <td rowspan="2">Local Training after machine installation</td> <td>Trainer Type (Local/ Foreign)</td> <td></td> </tr> <tr> <td></td> <td>Number of Trainer</td> <td></td> </tr> <tr> <td></td> <td></td> <td> <p>Training</p> <p>a. Machine Operators Training : 05 Working Days</p> <p>b. Machine maintenance, trouble shooting and repair training : 05 working days</p> <p>Topics:</p> <p>(i) Details operation of electrical, electronics, pneumatic system, hydraulic system and mechanical system with diagrams in details.</p> <p>(ii) Control system: program loading and unloading, debugging, editing and servo drive and servo motors interconnection and parameter setting in details.</p> <p>(iv) 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.</p> <p>(v) Safety procedures.</p> </td> <td></td> </tr> </tbody> </table>			Ser	Training	Details	Supplier's Opinion	(1)	Local Training after machine installation	Trainer Type (Local/ Foreign)			Number of Trainer				<p>Training</p> <p>a. Machine Operators Training : 05 Working Days</p> <p>b. Machine maintenance, trouble shooting and repair training : 05 working days</p> <p>Topics:</p> <p>(i) Details operation of electrical, electronics, pneumatic system, hydraulic system and mechanical system with diagrams in details.</p> <p>(ii) Control system: program loading and unloading, debugging, editing and servo drive and servo motors interconnection and parameter setting in details.</p> <p>(iv) 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.</p> <p>(v) Safety procedures.</p>			
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	(2) Supplier must submit local training plan along with the offer.																			
	n. The machine must be capable for mentioned operations for alloy steel and cast smoothly.																			
	p. Machine should be assembled in the manufacturing factory																			
	q. Warranty for 01 (One) year after acceptance.																			
	r. Fast and slow moving spares with quoted price are to be given with the tender including yearly escalation minimum for ten years.																			
	s. Certificate of Mother factory of country of origin must be supplied with the offer.																			
	t. All drives and Servo Motors must be of same Control System/Brand.																			
	u. Prices of optional & additional accessories, spares, Tools/Insert must be quoted separately.																			
	v. All necessary Software to handle & Maintain the machine must be supplied along with the machine.																			

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.

RESTRICTED

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 value (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.**