

DETAILS OF THE MACHINE

Sl. No	Specification		A/U	Qty
(a)	(b)		(c)	(d)
	5 Axis (3+2) CNC Machining Center with all standard and additional accessories as per specificaiton below :		No	1
1.	a.	Name of Item : 5 Axis (3+2) CNC Machining Center		
	b.	Qty : 1 (One) No.		
	c.	Model : To be mentioned.		
2.	<u>Specification:</u>			
	a. <u>Table Size :</u>			
	(1)	Length (Minimum) : 1000 mm		
	(2)	Wide (Minimum) : 500 mm		
	b. <u>Table travel :</u>			
	(1)	Longitudinal (X axis) : 900 mm (Minimum)		
	(2)	Vertical (Z axis) : 500 mm (Minimum)		
	(3)	Transverse (Y axis) : 460 mm (Minimum)		
	c. <u>4th and 5 th Axis (Swivel/ Tilt/ Rotary Type) :</u>			
	(1)	A or B axis travel (swivel/tilt) : -110° ~ -130° & +20° ~ +35°		
	(2)	C axis travel : 360°		
	(3)	Rotary table diameter : (200 ~ 650) mm		
	d.	Control axis : X, Y, Z, 4 th and 5 th Axis		
	e.	Spindle taper hole : BT-40		
	f.	Spindle speed (Minimum) : 8,000 rpm		
	g.	Feed Range (Minimum) : 1~10000 mm/min		
	h.	Rapid traverse X, Y, Z : (20~45) m/min		
	j.	Control System : Siemens/FANUC/HAAS (Latest Version)		
	k.	Display monitor : 10.4 Inches (min) Color Screen		
	l.	Memory capacity (Minimum) : 1 GB		
	m.	Minimum distance from spindle nose to surface of table : (100~150) mm		
	n.	Maximum distance from spindle nose to surface of table : (600 ~800) mm		
	p.	Drive Method : Direct		
	q.	Minimum Magazine Capacity (Automatic tool changing system) : 24 Nos		
	r.	Power supply requirement : 380 ~ 400 V, 3 Phase, 50 Hz		
	s.	Machine dimension (Height x Width x Length) : To be mentioned		
	t.	Chip conveyor : As per machine standard to be supplied along with the machine.		
3.	<u>Following Tool holders/cutters/Collet must be supplied with the machine and their prices must be quoted separately :</u>			
	a.	Insert Base Side Lock Holder Ø12 (BT-40) : Qty - 1 no		
	b.	Insert Base Side Lock Holder Ø14 (BT-40) : Qty - 1 no		
	c.	Insert Base Side Lock Holder Ø16 (BT-40) : Qty - 1 no		
	d.	Insert Base Side Lock Holder Ø18 (BT-40) : Qty - 1 no		
	e.	Insert Base Side Lock Holder Ø20 (BT-40) : Qty - 1 no		
	f.	Insert Base Face Milling Holder Ø50 (BT-40) : Qty - 2 nos		
	g.	Insert Base Face Milling Holder Ø60 (BT-40) : Qty - 2 nos		
	h.	Spring Collet Holder Ø08 (BT-40) : Qty - 15 nos		
	j.	Insert Base Boring Tool Holder Ø10 (BT-40) : Qty - 1 no		
	k.	Insert Base Boring Tool Holder Ø12 (BT-40) : Qty - 1 no		
	l.	Insert Base Boring Tool Holder Ø16 (BT-40) : Qty - 1 no		
	m.	Insert Base Drill Holder Ø12 (BT-40) : Qty - 4 nos		

RESTRICTED

Sl. No	Specification			A/U	Qty
(a)	(b)			(c)	(d)
	n.	Insert Base Drill Holder Ø14 (BT-40)	:	Qty - 2 nos	
	p.	Insert Base Drill Holder Ø16 (BT-40)	:	Qty - 2 nos	
	q.	Insert Base Drill Holder Ø18 (BT-40)	:	Qty - 2 nos	
	r.	Pull Stud Ø40 (BT-40)	:	Qty - 60 nos	
	s.	Collet Ø 1~25 (BT-40)	:	Qty - 6 sets	
4.	Country of manufacture of Main/major components			:	Group A (Spindle Motor, Servo Motor, Servo Control Unit, Lead Screw, Control Circuit and Fabrication)
5.	Country of Origin			:	Group A
6.	Country of Manufacture			:	Group A
7.	Port of Shipment			:	Group A
8.	Terms & Conditions :				
	a.	All standard, additional, optional and special accessories/items /attachment must supplied along the machine and the list of the same must be submitted with the quotation. The price of all additional, optional and special items must be quoted separately.			
	b.	List of spare parts with price required for 5 (five) years operation of the machine must be submitted with the financial offer.			
	c.	The machine must be capable to perform Milling, drilling, reaming etc.			
	d.	Pre-shipment Inspection (PSI) : Pre-shipment Inspection (PSI) will be carried out by BOF at the discretion of BOF authority and all cost will be borne by BOF. The team may be comprised of 2 (Two) BOF personnel for a period of 3 (Three) working days excluding journey period.			
	e.	Installation and Post Installation Requirement at BOF :			
		(1) Installation Requirement at BOF :			
	(a)	It is the responsibility of supplier to fully integrate and commission the machine at BOF's identified site/room. Machine installation and commissioning is to be provided by the certified engineers of machine manufacturer from same country or at least from same group of countries at BOF site.			
	(b)	BOF shall only provide utility service up to near proximity. All other related equipment, connections and fittings or any related things required for successful installation and running of the machine will be provided by the supplier.			
	(c)	Supplier shall bring all necessary calibration standards and calibration equipment for ensuring the machines accuracy with valid traceability certificates at BOF site.			
	(d)	After installation and commissioning of the machine, trial run, trial production followed by functional training and repair & maintenance training of BOF personnel by the certified engineers of machine manufacturer from same country or at least from same group of countries at BOF site to be provided. The training should cover complete operation, application, software usage (if required) in all aspects of measurement and data analysis, part programming for required samples, calibration, basic & preventive maintenance and troubleshooting etc. Following information must be given as below :			
	Ser	Items	Responsible (Supplier/BOF)	Duration	
	(a)	(b)	(c)	(d)	
	1.	Site Preparation	BOF and Supplier	To be mentioned	
	2.	Installation and Commissioning	Supplier	To be mentioned	
	3.	Trial Run	Supplier	To be mentioned	
	4.	Trial Production	Supplier	To be mentioned	
	5.	Local Training	Supplier and Foreign Trainer	To be mentioned	
		Repair and Maintenance Training	Supplier and Foreign Trainer	To be mentioned	

RESTRICTED

Sl. No	Specification	A/U	Qty
(a)	(b)	(c)	(d)
	<p>(2) Post Installation Requirement at BOF :</p> <p>(a) It is the responsibility of supplier to fully integrate, erect and commission the machine at BOF's identified site/ room. Machine installation and commissioning is to be provided by the Supplier at BOF site (within 30 days) after receiving machine by BOF.</p> <p>(b) BOF only provides utility service up to near proximity. All other related equipment, connections and fittings or any related things required for successful installation and running of the machine will be provided by the supplier.</p> <p>(c) Supplier shall bring all necessary calibration standards and calibration equipment for ensuring the machine accuracies with valid traceability certificates at BOF site.</p> <p>(d) After installation and commissioning of the machine Trial Production and Trial Run (minimum 15 working days excluding installation and commissioning period) by the Supplier's Technical Team at BOF site to be provided.</p> <p>(3) Local Training should be Cover Following Topic :</p> <p>(a) Details operation of electrical, electronics, pneumatic system, hydraulic system and mechanical system with diagrams in details.</p> <p>(b) Control System: Program loading and unloading, debugging, editing, servo drive and servo motors interconnecting and parameter setting in details.</p> <p>(c) Troubleshooting: Artificial problems to be created by removing sensors and changing the parameters of servo drive and servo motors followed by faults diagnosis and repair procedures.</p> <p>(d) Safety procedures.</p>		
f.	Software and License : If any software update, license key is required for the machine, supplier must provide this for machine's lifetime free of cost. Remote or system locking of the machine using software and password is not allowed. If done so, BOF will have the authority to reject the machine.		
g.	1x Operation/ Programming Manual in English (Hard & Soft copy) must be supplied with the machine.		
h.	1x Maintenance/Repair Manual (Hard & Soft copy) with Parts Catalogue along with circuit diagram in English to be supplied with the machine.		
j.	If any software update, license key is required for the machine, supplier must provide this for machine lifetime with free of cost. Remote or system locking of the machine using software and password is not allowed.		
k.	If any component/part of the machine is from the country other than the machine manufacturing country, then the name of the country must be mentioned with the name of the parts/component/part.		
l.	The year of manufacture of the machine must be the current year (Contracted year).		
m.	Automatic Chip Removing System with conveyer (Belt/screw type) must be provided with each machine (Price of conveyer should be quoted separately).		
n.	Standard cooling, lighting, lubricating & control system (Software & Hardware) must be provided with the machine.		
p.	The machine must have the capability of re-starting the ongoing operation/machining process from the point where it was stopped due to power failure.		
q.	Suitable Automatic Voltage Regulator (AVR) must be supplied with the machine.		
r.	Online diagnosis and troubleshooting option must be available and mentioned in details with the duration of service support duration and cost involved.		
s.	The supplier should provide Technical Data Sheet of each major parts/components (Serial 4) with the machine.		
t.	Warranty for 1 (One) year after acceptance must be provided by the manufacturer.		
u.	The supplier must mention the availability of Machine Tool Probes with the price quoted separately.		
v.	Basic axes X, Y & Z must be dedicated/integral to the machine (no additional/optional attachments/items to be used as any of the basic axes), 4th and 5th Axis may be arranged with additional/optional attachments/items.		

RESTRICTED

Sl. No	Specification		A/U	Qty
(a)	(b)		(c)	(d)
	w.	The supplier must provide Service Support for 10 (Ten) years after acceptance of the machine.		
	x.	Original Leaflet/Brochure must be submitted with the offer.		

General Terms & Conditions :

Supplier must mention their compliance on the following mentioned points :

1. A principal/manufacture can submit **only one offer through one local agent** for any individual item. Offers through multiple local agents by same principle/manufacture 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/manufacture 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, otherwise administrative action will be taken against the principal and local agent
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 1(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.**