

Name of Machine	Specification	A/U	Qty
(a)	(b)	(c)	(d)
3 Axis CNC Turning Center	3 Axis CNC Turning Center with all standard and additional accessories as per specification below :	No	01
	1. Model No : To be mentioned		
	2. Purposes/uses of Machine : To be described (Video will have to be provided if available)		
	3. Specification:		
	a. Maximum Swing Diameter : 400 ~ 550mm		
	b. Maximum Turning Diameter : 250 ~ 400mm		
	c. Maximum Turning length : 500 ~750mm		
	d. Stroke X/Y/Z : X = 200~275/ Y = (+40/-40), Z = 500~750 mm		
	e. Rapid Speed X/Y/Z : X =18~24, Z = 24~30 M/min		
	f. Cutting Speed : To be mentioned		
	g. Hydraulic Tail Stock with foot paddle switch : To be mentioned		
	h. Chips conveyer with chips cart : Attached with machine Standard		
	j. Spindle:		
	1) Max Rotation Speed : 4000 ~ 7500 rpm		
	2) Chuck Size : Ø 210 ~ 300 mm		
	k. Tail Stock		
	1) Taper : MK4		
	2) Quill Diameter : To be mentioned		
	3) Stroke of tailstock : 570 ~ 720 mm		
	l. Turret		
	1) Number of Tools (min) : 16		
	2) Tools Location : VDI 30		
	3) Number of Live Tools (min) : 16		
	4) Max. Rotation Speed : 4000 ~ 7500 rpm		
	m. System (CNC Type) Latest version of FANUC /Siemens/HAAS		
	n. Hydraulic System:		
	1) Operation pressure : To be mentioned		
	2) Oil Capacity of tank : To be mentioned		
	p. Pneumatic System : To be mentioned		
	q. Power supply : 380~400V, 3 ph, 50 HZ		
	r. Spares for each Machine:		
	1) VDI 30 Radial & Axial Live tool Holder (for Drilling) : 01+01= 02 Nos.		
	2) VDI 30 tool Holder Drilling : 02 Nos.		
	3) VDI 30 tool Holder for Turning Left & Right : 01+01=02 Nos.		
	4) Bearing for Tail Stock : 02 Set		
	5) Water Gun : 01 No.		
	6) Hard Jaw (Auto Block) : 01 set (each set Contain 3 Nos.)		
	7) Soft Jaw (Auto Block) : 01 set (each set contain 3 Nos.)		
	8) Spring Collet (Ø1 ~Ø20) mm : 01 set (each set contain 20 Pcs.)		
	s. Air Dryer with Filter and Automatic Voltage Regulator must be supplied with each machine which is suitable for the machine : 01 No. each		
	t. Tool measuring Probe (Automatic/ Manual) : To be mentioned		
	4. Country of Origin : Group - A		
	5. Country of Manufacturer : Group - A		
	6. Country of Assembling : Group - A		
	7. Port of Shipment : Group - A		
	8. Country of Major Component : Group - A		
	(All Servo motors, Spindle Motor, Control system including servo drives, Hydraulic Pump, Lead Screw, Main body, Tool Turret, Pneumatic actuators, Vector drive if available and electronics PCB cards)		
	9. Conditions:		
	a. All axes must be integral to the machine, no attachment to be used as any axis.		
	b. CNC Turning Center must be able to perform following operations: (1) Turning, (2) Drilling, (3) Reaming etc.		
	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. Standard cooling, lighting, lubricating & control system (Software & Hardware) should be provided with machine.		
	e. 1 × User/ programming manual in English (Hard & Soft copy) must be supplied with the machine.		

RESTRICTED

(a)	(b)	(c)	(d)
	<p>f. 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>g. Machine installation, commissioning & trial run must be completed by the supplier within one month (30 days) from the date of arrival of the machines at BOF.</p> <p>h. Local Training: Duration of training should be at least 04 working days. Following information must be given as under.</p> <p>(1) Details (Local Training after installation of Machine)</p> <p>(a) Trainer Type (Local/Foreign) : To be mentioned</p> <p>(b) Number of Trainer: At least 01 foreign expert. Trainer must be expert on operation/application and repair & maintenance on Electrical, Mechanical & Hydraulic system</p> <p>(2) Training:</p> <p>(a). Machine operation training : 02 working days.</p> <p>(b) Machine Maintenance, trouble shooting and repair training : 02 working days.</p> <p>(3) 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 and 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 drives and servo motors then faults diagnosis and repair procedures.</p> <p>(d) Safety procedures.</p> <p>j. Pre-shipment Inspection: 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) days excluding journey period.</p> <p>k. Automatic Chip Rimming System with conveyer belt/screw type will be provided with each machine (Price of conveyer belt/screw type should be quoted separately).</p> <p>l. The supplier should give service support for ten years after installation of machine.</p> <p>m. Warranty for one year after acceptance.</p> <p>n. Fast and slow moving spares with quoted price are to be given with the tender including yearly escalation minimum for ten years.</p> <p>p. Each tool holder should have one full set of tools with the machine. Price of full set of tools must be mentioned separately.</p> <p>q. All drives and Motors should be of same Control System.</p> <p>r. Prices of SPARES, 3(r) for each machine must be quoted separately</p>		