

Name of Machine	Specification	A/U	Qty																																																																																																				
(a)	(b)	(c)	(d)																																																																																																				
5 Axis (3+2) CNC Machining Center	5 Axis (3+2) CNC Machining Center with all standard and additional accessories as per specification below :	No	01																																																																																																				
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Control axis : X, Y, Z , 4th &amp; 5th Axis</td> </tr> <tr> <td data-bbox="248 891 312 918"></td> <td data-bbox="312 891 1385 918">e. Spindle taper hole : BT 40</td> </tr> <tr> <td data-bbox="248 918 312 945"></td> <td data-bbox="312 918 1385 945">f. Spindle speed : Min 10,000 rpm</td> </tr> <tr> <td data-bbox="248 945 312 972"></td> <td data-bbox="312 945 1385 972">g. Spindle motor power : To be mentioned</td> </tr> <tr> <td data-bbox="248 972 312 999"></td> <td data-bbox="312 972 1385 999">h. Distance from spindle nose to surface of table: Minimum ≤150 mm &amp; maximum ≥ 740 mm</td> </tr> <tr> <td data-bbox="248 999 312 1025"></td> <td data-bbox="312 999 1385 1025">j. Cutting speed : 20,000 mm/min (Min)</td> </tr> <tr> <td data-bbox="248 1025 312 1052"></td> <td data-bbox="312 1025 1385 1052">k. Tool diameter : (60~80) mm (full) &amp; (125~130) mm (Empty)</td> </tr> <tr> <td data-bbox="248 1052 312 1079"></td> <td data-bbox="312 1052 1385 1079">l. Maximum tool length : Up to 300 mm</td> </tr> <tr> <td data-bbox="248 1079 312 1106"></td> <td data-bbox="312 1079 1385 1106">m. Rapid traverse (X, Y, Z) : Min 20 m/min</td> </tr> <tr> <td data-bbox="248 1106 312 1133"></td> <td data-bbox="312 1106 1385 1133">n. Type of control system : Upgraded version of HAAS/SIEMENS/FANUC</td> </tr> <tr> <td data-bbox="248 1133 312 1160"></td> <td data-bbox="312 1133 1385 1160">p. Display monitor : 15 inch LCD Color (min)- adjustable operator panel, adjustable angle and position</td> </tr> <tr> <td data-bbox="248 1160 312 1187"></td> <td data-bbox="312 1160 1385 1187">q. Memory capacity : 2 GB (min)</td> </tr> <tr> <td data-bbox="248 1187 312 1214"></td> <td data-bbox="312 1187 1385 1214">r. Magazine Capacity (Automatic tool changing system): Min 30</td> </tr> <tr> <td data-bbox="248 1214 312 1240"></td> <td data-bbox="312 1214 1385 1240">s. 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Control axis : X, Y, Z , 4th & 5th Axis		e. Spindle taper hole : BT 40		f. Spindle speed : Min 10,000 rpm		g. Spindle motor power : To be mentioned		h. Distance from spindle nose to surface of table: Minimum ≤150 mm & maximum ≥ 740 mm		j. Cutting speed : 20,000 mm/min (Min)		k. Tool diameter : (60~80) mm (full) & (125~130) mm (Empty)		l. Maximum tool length : Up to 300 mm		m. Rapid traverse (X, Y, Z) : Min 20 m/min		n. Type of control system : Upgraded version of HAAS/SIEMENS/FANUC		p. Display monitor : 15 inch LCD Color (min)- adjustable operator panel, adjustable angle and position		q. Memory capacity : 2 GB (min)		r. Magazine Capacity (Automatic tool changing system): Min 30		s. Power Supply : 380 ~420 V, 3 Phase, 50 Hz		t. 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4.	<b>Country of Origin : Group-A</b>								
5.	<b>Country of Manufacturer : Group-A</b>								
6.	<b>Country of Assembling : Group-A</b>								
7.	<b>Port of Shipment : Group-A</b>								
8.	<b>Country of Major Component : Group A</b> (All Servo motors, Spindle Motor, Control system including servo drives, Hydraulic Pump, Lead Screw, Main body, Tool Magazine, Pneumatic actuators, Vector drive if available and electronics PCB cards)								
9.	Percentage (%) of spares other than the machine manufacturing country with their list and country of origin to be mentioned								
10.	<b>Conditions:</b> a. The Machine must be able to perform the following operations: (1) Milling, (2) Drilling, (3) Reaming etc. b. All standard accessories and attachments including cooling, lighting, lubrication & control system (Software & Hardware) must be provided with the machines and list with prices of the same must be provided separately .In addition if the Item(s) mentioned in item(s) at 3 t.(1) to 3 t.(8) are separate than prices need to be mentioned separately. These prices will be included in the total price of the machine for price comparison. c. Manual Work/Tool offset measuring device must be supplied with each Machine. d. 1xUser/ programming manual in English (Hard & Soft copy) must be supplied with the machine. e. 1xOperation, 1xMaintenance 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: (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. (2) Maintenance and Repair Manual: Detail troubleshooting & repair procedure as well as maintenance and safety system. f. 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. <b>g. Local Training: Duration of training should be at least 16 working days. Following information must be given as under.</b> (1) <u>Details (Local Training after installation of Machine)</u> (a) Trainer Type (Local/Foreign) : To be mentioned (b) Number of Trainer: At least 02 foreign expert. One must be expert on operation/ application and one must be expert on repair & maintenance on Electrical, Mechanical & Hydraulic system <b>(2) Training:</b> (a). Machine operation training : 08 working days. (b) Machine Maintenance, trouble shooting and repair training : 08 working days. <b>(3) Topic:</b> (a) Details operation of electrical, electronics, pneumatic system, hydraulic system and mechanical system with diagrams in details. (b) Control system: Program loading and unloading, debugging, editing and servo drive and servo motors interconnecting and parameter setting in details. (c) 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. (d) Safety procedures. h. Supplier must submit Local training plan along with the offer. j. <b>Foreign training proposal:</b> A 03 (three) Members BOF Team would go for operation and maintenance training to the supplier's factory for a duration of 05 (Five) working days. Air Ticket, Pocket money, food, accommodation & medical costs (if needed) will be borne by BOF. <b>k. Pre-Shipment Inspection :</b> (1) 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 03 (Three) BOF personnel for a period of 03 (Three) working days excluding journey period. (2) Supplier must submit details plan of PSI (Modus Operandi).								

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