

**CNC Lathe
Technical Specifications**

Make		To be specified by the Bidder
Model		To be specified by the Bidder
1	Capabilities	
1.1	Max. Turning diameter	350 mm or better
1.2	Swing over bed	500 mm or better
1.3	Swing over carriage	225 mm or better
1.4	Max. Turning length	500 mm or better
1.5	Distance between centers	550 mm or better
1.6	Max work piece weight	Bidder to specify
1.7	Max. Achievable Part Surface finish (Ra)	Bidder to specify (Test report to be submitted)
2	Axis Travels (Nominal)	
2.1	Traverse stroke, X axis	180 mm or better
2.2	Longitudinal stroke, Z axis	500 mm or better
3	Spindle	
3.1	Spindle Motor Power	7.5 KW or better
3.2	Max. Spindle Speed	4000 rpm or better
3.3	Spindle Size / Nose	A2-6
3.4	Spindle Bore	63 mm or better
3.5	Standard Chuck Size	200 mm or better
3.6	Max. Bar Capacity	51 mm or better
4	Feed	
4.1	Cutting Feed Rate	10000 mm/min or better
4.2	Rapid Traverse X Axis	20 m/min or better
4.3	Rapid Traverse Z Axis	20 m/min or better
5	Turret	
5.1	Type	Bi-directional Indexable
5.2	No. of Tool Stations	8 or better
5.3	Tool shank size	20 X 20 mm or better
5.4	Max. Boring Diameter	32 or better
6	Tailstock	
6.1	Tailstock Quill Diameter	80 mm
6.2	Tailstock Quill Stroke	100 – 120 mm
6.3	Tailstock Quill Taper	MT-4
6.4	Tailstock Base Travel	400 mm or better
7	CNC System	
7.1	Controller	Fanuc / Siemens / Haas or equivalent - latest with Complete Module
7.2	Onboard Storage for Part Programmes	Bidder to specify in GB
7.3	Programming Functions with Editor	Complete Module
7.4	Monitor Screen Size & Type	Bidder to specify
7.5	Data Transfer & Connectivity	Ethernet, USB Ports, RS-232C Communication Ports, Etc.
8	Accuracy	
8.1	Positioning Uncertainty	5 microns or better
8.2	Overall Axis Repeatability (X, Z)	5 microns or better
8.3	Part Surface Finish	5 microns or better
8.4	Roundness	5 microns or better
8.5	Turret Indexing Repeatability	5 microns or better
9	Essential Accessories	
9.1	Tailstock with Programmable Quill	One No.
9.2	Hydraulic 3 Jaw Chuck	One No.
9.3	Soft Jaws	Two Sets
9.4	Set of Standard Cutting Tools with holders for replaceable inserts (for Facing, Turning, Boring, Threading, Grooving, Parting, Drilling, Knurling & other standard operations of machine)	Bidder to specify standard tools package details and quote for the additional tools supplied
9.5	Coolant System	Bidder to specify and quote suitable for the machine
9.6	Airgun / Flushing Gun for internal cleaning	Bidder to specify and quote suitable for the machine
9.7	Start-up Tool kit	Bidder to specify and quote suitable for the machine
9.8	Foot switch	Bidder to specify and quote suitable for the machine
9.9	Work light	Bidder to specify and quote suitable for the machine
9.10	Centralized lub. System	Bidder to specify and quote suitable for the machine
9.11	Set of Anti-Vibration Machine Mounts / Levelling Pads	Bidder to specify and quote suitable for the machine
9.12	Voltage Stabilizer	Bidder to specify and quote suitable for the machine
9.13	Ultra Isolation transformer	Bidder to specify and quote suitable for the machine

10	Any Others Accessories	Bidder to specify and quote if any other accessories available /required for smooth running of the machine including Software for Machine Monitoring & Machine Maintanace, etc.
11	Terms & Conditions	Manufacture/Supplier should have sizable installations of same or better model worldwide and at least Five in India including centrally funded institutions.
		Copies of min. 5 Nos. of Purchase Orders for the same model machine supplied in this & previous financial years to be sibmitted.
		A Satisfactory Performance certificate from five organizations to be provided for eligibility. Bidder should submit complete contact details of the concerned organizations.
		List of clients in last five years to be provided.
		Manufacture/Supplier must have 1. Required setup to manufacture/supply the machine. Site Visit/Inspection may be done for Technical Evaluation. 2. Minimum Annual Turnover of Rs. 100 Crores. 3. Minimum of 50 Direct Employees working at their firm. Supporting Documents to be submitted for the above for verification.
		Equipment should be CE certified
		Authorization Letter from OEM
12	Scope of supply	Bidder should submit complete scope of supply (Machine, standard accessories, Optional Accessories etc with make & model) in the technical bid without price. Bidder should supply complete start-up package necessary to prove the machine and provide training.
13	INSTALLATION, COMMISSIONING AND TRAINING	
13.1	Installation and commissioning requirements	Bidder should state the space required and condition of floor and any other requirements for installation of the machine and equipments. State clearly the specifications of electrical requirement. Vendor should carry out supply, unloading, positioning, installation and commissioning of the machine and its accessories on a turnkey basis including required power cables and first fill of oils & other consumables.
13.2	Training and documentation	Minimum of 3 days training on Programming, Operations & Maintenance of supplied machine. Training content and plan to be submitted. Training faculty must have adequate experience in this field.
		The vendor should supply the hardcopy of all necessary manuals such as
		- Machine Operation Manual
		- Software Instruction Manual
		- Maintenance and Troubleshooting Manual
		- Training Manual
		- Installation and Commissioning
- Handling of Accessories		
		and also Softcopy of all Manuals & applicable Software CDs
13.3	Warranty	The whole system and its accessories should be given two years warranty for the machine and three years for the spindle replacement and service against any design, manufacturing and workmanship defects from the date of installation and commissioning.
13.4	Technical support and service	Manufacturer should have established after sales & service network in India. The vendor shall have local service and application office and infrastructure to attend by visit within 48 hours of need. Technical support personnel must have adequate experience in this field. Technical support personnel details should be submitted. Name and address of the authorized service centre/ partner in India along with the certificate of authorization should be attached.
13.5	Annual Comprehensive Maintenance Contract (ACMC) as optional	Vendor should quote for Annual Comprehensive Maintenance Contract for the whole system and accessories supplied after the completion of performance warranty period. Supplier has to provide service support within 48 hours. Calibration of the machine shall be a part of warranty and ACMC. It shall also be mandatory to perform calibration after every major repair or breakdown