

Technical Specification for Precision Centre Lathe Machine

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2444469/2026/O/o Sr DMM/BSP/SECR

NSR No.- SECR-063654-25-01209, Date: 31/12/2025

1.	Name of the Machine:- Precision Centre Lathe Machine
2.	Quantity: 01 No.
3.	Specifications :- As per attached Annexure A
4.	Concomitant Accessories & Optional Accessories:- The tenderer shall quote separately for the concomitant accessories & optional accessories, which in the opinion of the tenderer will be essential & will improve the efficiency and productivity of the equipment.
5.	Safety Features:- All safety features for personal safety and plant must be detailed in the offer. All protective devices should be fully confirming latest safety regulations in force.
6.	Drawings:- 1 – General arrangement drawing shall be supplied by the tenderer along with the offer so as to have an idea of the Machine/plant offer by them. 2 – Detailed GA Drawing Mechanical, Electrical (With Details of Each Part including PCB) shall be supplied by the successful tenderer in 4(four) copies free of cost.
7.	Technical Literature:- Four copies of Operating and maintenance manual, spare parts catalogue giving the part list number of each component with exploded views and assembly drawings, trouble shooting guide, electrical & electronic circuit diagrams must be supplied along with the machine. All the components used in the equipment must be as per latest ISI or international standard. The firm shall have proved past performance for supply of at least two similar machines.
8.	The tenderer must provide adequate after sales service during warranty and post warranty period. Tenderer will also indicate service organizations located at various places in India and the availability of trained staff, maintenance spares etc. at different centre in the country.
9.	Tenderer must submit clause wise compliance of technical specifications while filling the tender.
10.	Training – To be imparted to sufficient numbers of staff at the premises of consignee free of cost during commissioning of machine.
11.	Installation, Commissioning and Proving Tests:- On receipt of machine, the firm or his agent would be required to carry out a joint check at the consignee's end along with the consignee before unpacking is done to avoid subsequent complaint regarding short shipment / transit damages. It is necessary that this joint inspection be done immediately on receipt of the machine by consignee & firm's representative to avoid commissioning delays due to shortage / transit damages.
12.	Commissioning Time:- The machine should be commissioned within 30 days of supply.
13.	Warranty:- The machine should have warranty for the period of 2 years from the date of commissioning.
14.	Following items of work shall be performed by the supplier:- (a) Construction of foundation & Installation of machine at site provided by consignee. (b) Complete fitting and wiring of all electrical items. (c) Commissioning of the equipment.
15.	Inspection Authority:- As per existing purchase norms.
16.	AMC/CAMC:- Not required


Audhans
SSE/M&P/Chg/BSP
सीनियर सेक्शन इंजीनियर (कोचिंग)
Senior Section Engineer (Coaching)
द.पू.म.रेलवे, बिलासपुर
S.E.C.Railway, Bilaspur

Annexure A

A. Scope of Supply: Supply, Installation, Commissioning and Proving Out of Precision Centre Lathe Machine

B. Technical Specification:

S. No.	Parameters	Unit	Dimensions
1.	Lathe Machine Confirming to IS6893-1988 or Latest (For Technical Evaluation)		
2.	Lathe Machine Material Confirming to IS 210 or Latest (For Casting)		
3.	Distance Between centers (mm) x Swing over Bed (mm)	mm	1500 x 600(±10)
4.	Swing over bed	mm	575±10
5.	Center Height	mm	260±10
6.	Swing over cross slide	mm	350±10
7.	Swing over carriage wing	mm	545±10
8.	Swing in gap	mm	800±20
9.	Width of gap in front	mm	175±10
10.	Type of Bed	Inverted V type	
11.	Length of Bed	mm	2720±20
12.	Width of Bed	mm	175±10
13.	Gap in Bed	mm	175±10
14.	Rapid Traverser of Saddle & Cross Slide	No	
15.	Maximum Feed Force	N	500±10
16.	Maximum Facing Diameter	mm	600±10
17.	Maximum Weight of Work Piece that can be held between chuck and supported by live Centre	Kg	600±10
18.	Maximum Weight of Work Piece that can be held between chuck and supported by dead centre	Kg	600±10
19.	Maximum Torque on Spindle	NM	11±1
20.	Size of Spindle	mm	165±10
21.	Type of Chuck	3 Jaw and 4 Jaw	
22.	Travel of Cross Slide	mm	300±10
23.	Travel of Top Slide	mm	150±10
24.	Main Motor Power	kw	11±1
25.	Types of Power Supply	3 phase	
26.	Coolant Pump output as per IS 2161:1962 or latest	kw	0.12±0.01
27.	Minimum chucking diameter	mm	10±1
28.	Maximum chucking diameter	mm	600±10


 SSE/M&P/Chg/BSP
 सैनियर सेक्शन इंजीनियर (कोचिंग)
 Senior Section Engineer (Coaching)
 द.पू.म.रेलवे, बिलासपुर
 S.E.C.Railway, Bilaspur

29.	Tail Stock Sleeve Diameter	Mm	90±10
30.	Maximum Offset of Tailstock on either side of Center Line	mm	4±0.5
31.	Sleeve Travel Type(Tail Stock)	Manual	
32.	Lubrication System Requirement as per IS:11118 or latest		
33.	Positioning Accuracy as per IS:1878 or latest for Cumulative Error		
34.	Positioning Accuracy as per IS:1878 or latest for Backlash		
35.	Positioning Accuracy as per IS:1878 or latest for Minimum Possible Requirement		
36.	Geometric Accuracy as per IS:1878-1971 or latest for general purpose lathe		
37.	Geometric Accuracy as per IS: 6040-1972 or latest for precision lathe		
38.	Machine Bed & Tail Stock casting Grade as per IS:11118-1997 or latest		
39.	Tail stock sleeve casehardening steel 15Ni7Cr4M02 as per IS: 1118-1997 or latest		
40.	Type of Spindle		A2-6'
41.	Size of Spindle	mm	165±5
42.	Type of Spindle Nose		A2-6'
43.	Taper in Spindle Bore as per IS 2582-1972 with Latest amendment		mETRIC 60
44.	Taper Bore in Spindle Sleeve as per IS 1715-1986 with Latest amendment		mT5
45.	Bore in Spindle	mm	53±1
46.	Range of Spindle Speed in Forward Direction	rev/min	40- 2040
47.	Range of Spindle Speed in Reverse Direction	rev/min	60-1430
48.	Travel of Sleeve	mm	200±10
49.	Lead Screw Diameter	mm	36±1
50.	Lead Screw Pitch	mm	5±1
51.	Longitudinal /lead Screw Feed Range	Mm/rev	0.05-2.24
52.	Cross feed range	mm	0.5-28
53.	British Thread range	TPI	1-56
54.	Module thread Range	mm	14±1
55.	Diametral Pitch Range	mm	112±2

Note: 1. Starter of machine should consist of overload & single phase preventer.

2. Electrical motor should be IE₃ or above.

A. Kumar
SSE/M&P/Chg/BSP
 सीनियर सेक्शन इंजीनियर (कोचिंग)
 Senior Section Engineer (Coaching)
 द.पू.म.रेलवे, बिलासपुर
 S.E.C.Railway, Bilaspur

