

## Annexure-I

### SECIFICATIONS FOR EOI OF PROPOSED CNC VERTICAL BORING MACHINE

(Specification Number: **TXM/VB/2023-24-01**)

**PURPOSE:** This machine is required for facing , OD/ ID turning , Chamfering , boring , profile machining of Vande Bharat (IM3004) & IM3302 Stator Frame.

**MATERIAL OF THE COMPONENT TO BE MACHINED:** Carbon Steel (IS AA19512 OR IS AA10122), Alloy steel, SG Iron (IS AA19721).


**DRAWING REFERENCES:** The machine should be capable of performing machining operations as per the sketches attached in Annexure-2.


**MACHINE TYPE:** CNC Vertical Boring

### TECHNICAL AND PRE-QUALIFICATION REQUIREMENT (PQR)

Clause No.	Description	Requirement
<b>(A) TECHNICAL REQUIREMENT</b>		
1	<b><u>JOB DIMENSIONS</u></b>	
1.1	Maximum Turning Diameter of the Job	1200 mm
1.2	Maximum Height of the Job	1200 mm
1.3	Minimum Diameter of the Job	200 mm
1.4	Maximum Weight of the Job	1500 Kg
1.5	Presence of machining operations with intermittent Cuts	YES
1.6	TABLE	
1.6.1	Size:	Vendor to specify
1.6.2	Load Capacity :	Vendor to specify with suitable Factor of Safety
1.6.3	Table speed (Infinitely Variable)	6-200RPM (Vendor to specify)
1.7	Vendor shall suggest suitable accessories like hydraulic chuck, universal milling head etc for machining of our component.	 जयंत हिरवाने / JAYANT HIRWANE प्रबंधक / Manager विद्युत सेवाएँ विभाग / E.L.X. Division बी.एच.ई.एल., भोपाल / B.H.E.L., BHOPAL

  
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2	<b><u>DETAILS OF ACCURACIES REQUIRED TO BE ACHIEVED ON THE MACHINED COMPONENTS</u></b>	
2.1	Runout	0.02 mm or better
2.2	Concentricity	0.02 mm
2.3	Perpendicularity	0.03 mm
2.4	Parallelism	0.03 mm
2.5	Dimensional tolerance on diameter (Approximate Dia. 495 mm)	0.02mm
3	<b><u>SURFACE FINISH REQUIRED ON THE JOB</u></b>	
3.1	Surface finish required on the job.	1.6 RA or better
4	<b><u>CONSTRUCTIONAL DETAILS</u></b>	
4.1	<b>Machine configuration :</b> Vendor to specify the configuration of the machine ( <b>Single column</b> Or <b>Double column</b> construction)	Vendor to specify
4.2	Whether the main assemblies / sub-assemblies of the machine are made of <b>Cast Iron</b> .	Vendor to specify
4.3	Vendor to submit complete technical specifications / details of the major assemblies / sub-assemblies of the machine such as constructional details and accuracy. Any special attachment, tooling and other relevant/necessary data pertaining to the machine also to be specified.	Vendor to specify
4.4	Details of CNC/PLC/Drives/Motors offered (Acceptable makes Siemens / Fanuc).	Vendor to specify
<b>(B) PRE-QUALIFICATION REQUIREMENT (PQR) :</b> Vendor must submit complete information against <b>Clause No.5</b> . Offers not meeting this clause would not be considered.		
5	<b><u>QUALIFYING CONDITIONS :</u></b>	
5.1	The supplier/ <b>vendor</b> should be either an Original Equipment Manufacturer (OEM) or an authorized Dealer of the OEM for the offered <b>machine</b> . Along with the offer, dealers have to submit a valid certificate of Authorization	Vendor to confirm

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	from OEM for quoting the <b>machine</b> . Vendor should submit proof of the same.	
5.2	The OEM or the authorized dealer of the OEM must have supplied <b>at least ONE machine</b> of the OEM make of same or higher capabilities suitable to machine jobs as specified in Clause 1 & accuracies <b>as per</b> Clause 2 in the past 10 years (on the date of opening of Tender).	Vendor to confirm
5.3	Copy of Purchase Order (PO) in the name of OEM or the authorized dealer of the OEM for machine as per <b>clause 5.2</b> is to be submitted along with the offer. The type, make and model of the machine should be clearly mentioned in the PO copy. Vendor should submit proof of the same.	Vendor to confirm
5.4	Bidder shall not be under a " <b>Declaration of Ineligibility for corrupt or fraudulent practices or blacklisted with any of the State, Central Government/Public Enterprises</b> "	Vendor to confirm
<b>(C) OTHER QUALIFICATION REQUIREMENTS (TO BE NECESSARILY SUBMITTED AT THE TIME OF FINAL TENDERING)</b>		
6.1	Authorized Dealer of the OEM shall be required to submit the <b>declaration for support</b> from OEM for Erection & Commissioning, after sales service & necessary spares support for <b>minimum of 5 years from the date of commissioning</b> . In addition to the above, a back-to-back guarantee from OEM for performance of the machine is also required.	Vendor to note
6.2	<p>The machine referred in <b>Clause 5.2</b> should be working satisfactorily for more than one year after commissioning (on the date of opening of Tender).</p> <p>The Performance Certificate submitted should be recently issued (i.e. its date of issue should not be more than <b>1 year</b> old from the tender opening date) from the customers regarding satisfactory performance of the machine supplied to them vide the Purchase Order as per <b>clause 5.3</b>.</p> <p><b>Note:</b> Vendor to indicate clearly the Purchase Order (PO) Number, PO Date and Date of Commissioning of the machine on the performance certificate.</p>	<p>Vendor to note</p> <p>जयंत हिरवाने / JAYANT HIRWANE प्रबंधक / Manager विद्युत सेवाएँ विभाग / E.L.X. Division बी.एच.ई.एल., भोपाल / B.H.E.L., BHOPAL</p>

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6.3	<p>Vendors should necessarily furnish following details about the companies where they have supplied the machine for which they are submitting the documents in order to fulfil qualifying criteria as mentioned in <b>clause 5</b>:</p> <p>A) Name of the customer/company.  B) Complete postal address.  C) Broad parameters of the machine and application.  D) Name &amp; designation of contact person.  E) Phone, Mobile &amp; E-mail address of the contact person.</p>	Vendor to note
6.4	<p><b>Financial PQC:</b></p> <p>Vendor should have minimum average turnover of Rs.50 lakhs for the last 3 consecutive years ending March 2023.</p> <p>Vendor to submit Profit &amp; Loss Account Statement of last three consecutive years ending march 2023 as documentary evidence for the same.</p> <p>For Micro &amp; Small Enterprises (MSE) &amp; Start-Up Vendors who are OEM, no Financial PQR criteria is required. However, if they are quoting as authorised dealer of OEM then either OEM or the concerned MSE &amp; Start-up vendor should necessarily qualify the financial PQC as mentioned above.</p>	Vendor to note
<b>(D) MAKE IN INDIA (MII) CONTENT</b>		
7	Vendor to mention the Make In India content (Value addition in India) of the offered machine in percentage (%). Details to be submitted.	Vendor to specify
<b>(E) MISCELLANEOUS</b>		
8.1	<p>The sample sketches (Annexure- 2,) are enclosed for the purpose of clarity of requirement to potential bidders.</p> <p>These sketches are for the purpose of explanation of extreme machining dimensions only.</p> <p>These sketches are confidential in nature and must not be used directly or indirectly in any way detrimental to the interest of BHEL.</p>	<p>Vendor to note</p> <p>जयंत हिरवाने / JYANT HIRWANE  प्रबंधक / Manager  विद्युत सेवाएँ विभाग / E.L.X. Division  बी.एच.ई.एल., भोपाल / B.H.E.L., BHOPAL</p>

  
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8.2	Potential vendors can visit to BHEL works on prior appointment for any clarification & discussion about our requirement.	Vendor to note
8.3	BHEL reserves the right to verify information provided by the Vendor at their referred customer's works including machining accuracies (For the machine mentioned in qualifying criteria). It shall be the responsibility of the vendor to facilitate the visit of BHEL's team at their referred customer works. In case the information provided by vendor is found to be false / incorrect, <b>the offer shall be rejected.</b>	Vendor to note
8.4	BHEL reserves the right to assess the OEM or the authorized Dealer of the OEM, with respect to their technical and financial capability (As per the information provided in <b>clauses 5.1 to 5.3</b> ).	Vendor to note

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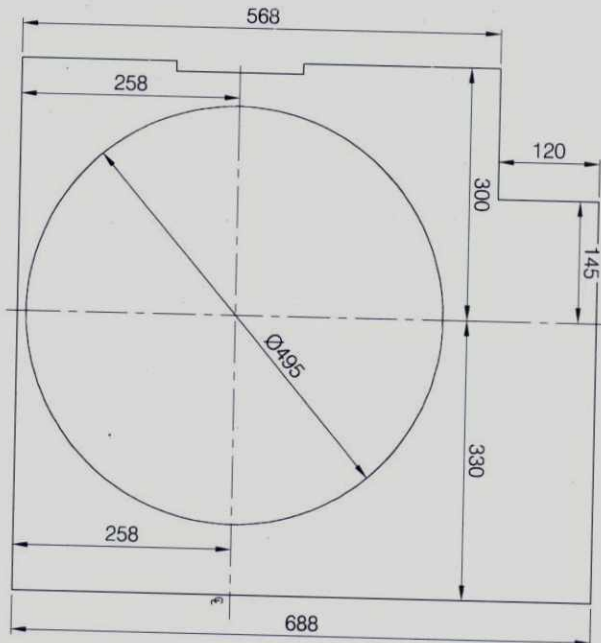
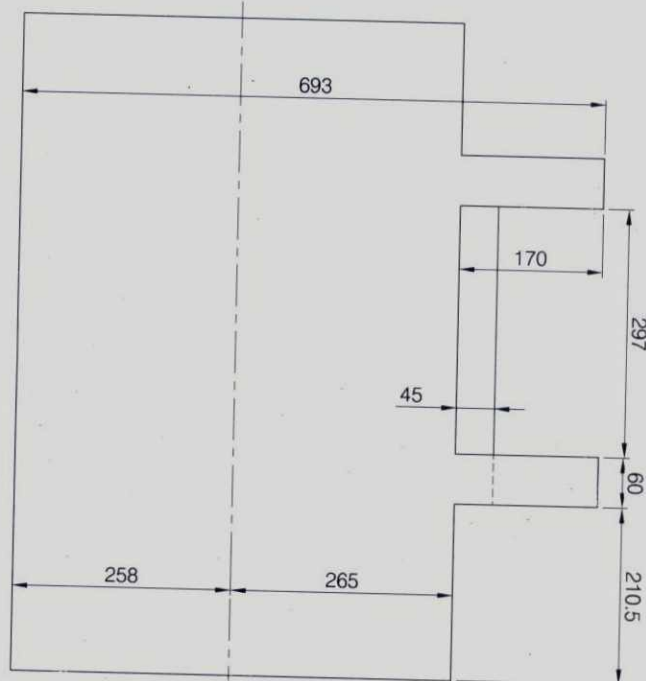
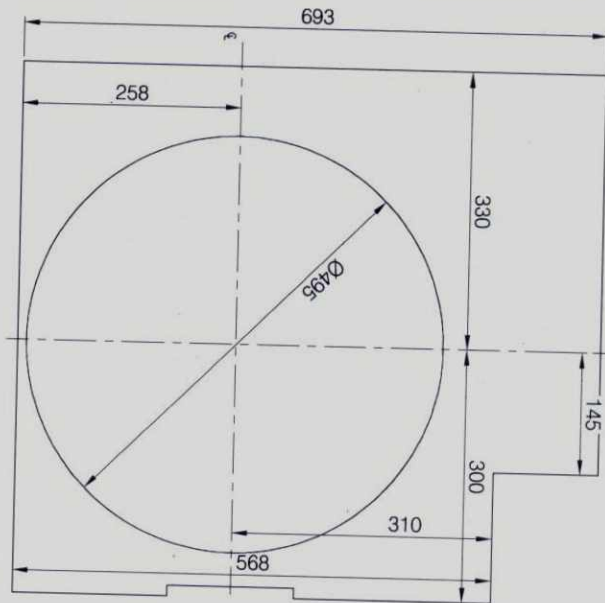
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