

Domestic tender notification for the procurement of- VERTICAL DIAMOND WIRE SAW SETUP

The purchase of vertical diamond wire saw is planned. This setup will be utilized for precise cutting of the samples for microstructure characterization of various materials of interest. Below, the detailed technical specifications for an ideal machine are mentioned.

TECHNICAL SPECIFICATIONS

Scope of work: Supply, installation, and commissioning of vertical diamond wire saw setup with the following features.

S. No.	VERTICAL DIAMOND WIRE SAW SETUP	
1	<p>Precision VERTICAL Diamond Wire Saw “BASE”</p>	<ul style="list-style-type: none"> • The cut should be made by the movement of the wire on a workpiece that is bonded or clamped to a fixed support. • This feed should be automatically achieved by gravity. • The pressure exerted by the cutting tool (the diamond wire) on the sample should be adjustable. • The feed speed should be determined by the resistance of the material, which is thus not subjected to mechanical stress. • Vertical wire • Adjustable wire speed • Automatic saw shut off at the end of cutting or in case of wire breakage. • Designed for use with cutting fluid. • Easy to use. Specifications: • Cutting orientation → Vertical • Cutting feed → Gravity (+/- 300g) • Primary voltage → 230V-110V / 50-60Hz • Secondary voltage → 36Vdc • Electric motor → 200W • Primary fuse → Ø 5 x 20mm, 250V, 2A • Secondary fuse → Ø 5 x 20mm, 250V, 10A • Machine weight → 13.80 kg • Overall dimension → L x W x H; 401 x 345 x 455 mm • Drum diameter → 83 mm • Pulleys diameter → 80 mm • Table surface → 330 x 370mm • CE Certification → CE • USB Output → Yes • Wire diameter → 0.10-0.30mm • Wire length → 10m • Wire speed → 0-3.6 m/s • Wire tension. → 0.10-0.17 mm. 1 kg

		<ul style="list-style-type: none"> • Cleaning of wire → Cutting liquid • Sample weight → 2500 g • Sample dimension → <math>H = 50 \times W = 50; \varnothing 50\text{mm}</math> • Warranty → 12 months
2	Accessories	<ul style="list-style-type: none"> • 1x Standard Table • 1x Support sample holder • 1x Standard Sample holder with 5 ceramic plates $\varnothing 30\text{mm}$ • 1x Intermediate support • 1x Drum pre-wound with 10 meters of diamond wire. • 1x Diamond wire spool 120 meter (0.30 mm- 20 micron) • 1x Cutting liquid concentrate 5% 500 ml • 1x Toolbox 1x LED Lamp with Clip-on • 1x Soft Touch Pen 1x Power Cable • Heating Plate 230V – 200W Model “Base” • Ceramic plates, Set of 5 Ceramic plates. • Adhesive Wax Bar 100 Degree Celsius • Winding Device • Wire empty drums (Precision) • Pulley (Precision) • Vise for round sample, D 12mm to 32mm • Diamond Wire 0.3mm – 20 μ, Spool 120m • Diamond Wire 0.30mm – 60 μ, Spool 120m • Cutting liquid – 500cc (Set of 4) • Dilution 5% • 1x User Manual
3	Pre-dispatch inspection	<ul style="list-style-type: none"> • Based on a mutually agreed testing plan, on-site testing on samples provided by IISc and qualification will be done before the equipment is made ready for shipping. Data should be shared with IISc, and approval should be obtained before shipping. • Supplier should furnish the compositional analysis of pull rods, fixtures, adapters, grips and couplers before shipping
4	Acceptance	<ul style="list-style-type: none"> • The supplier must demonstrate all the functions of the system according to the specifications after successful commissioning at IISc

TERMS AND CONDITIONS

1. The Bidder should belong to either Class-1 or Class-2 suppliers distinguished by their “local content” as defined by recent edits to GFR. They should mention clearly which class they belong to in the cover letter. a) Class-1 supplier: Goods and services should have local content of equal to or more than 50%. b) Class-2 supplier: Goods and services should have local content of equal to or more than 20 % and less than 50%.
2. Bidders offering imported products will fall under the category of non-local suppliers. They cannot claim themselves as Class-1 local suppliers/Class-2 local suppliers by claiming the services such as transportation, insurance, installation, commissioning, training, and other sales service support like AMC/CMC, etc., as local value addition.
3. Purchase preference as defined by the recent edits to GFR (within the “margin of purchase preference”) will be given to the Class-1 supplier.
4. MSMEs can seek an exemption to some qualification criteria. IISc follows GFR2017 for such details.
5. Two-bid system (separate technical and financial bids) in sealed tenders.
6. The technical bid must clearly specify the prescribed technical specifications without including the prices. Please provide in detail the specifications under each subhead and bullet point. Unique characteristics may be highlighted.
7. Vendors who include price information in the technical bids will be automatically disqualified.
8. The quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor.
9. The quotations should be on FOR-IISc Bangalore basis in INR only.
- 10. The Vendors must have supplied at least 5 testing systems to centrally funded technical institutes (IISc, IITs and NITs) and national research labs (DAE, DRDO, DMRL, NAL, NML and equivalent) in the last 10 years. A detailed list of users, along with contact information of primary users, should be provided.**
- 11. At least 3 independent reference letters from India (from institutions mentioned in point 4) should be provided at time of submission of tender (as part of technical bid). IISc may contact more users to obtain independent references. The committee will have the right to reject a bid based on reference letters.**
12. The financial turnover of the equipment manufacturer in the previous financial year should be more than or equal to 10 times the total order value. The bidder shall furnish specific details of the company’s performance.
- 13. Technical bids will be opened first. IISc may seek clarifications after opening of technical bids and may ask vendors to perform some example experiments on the samples given by IISc to demonstrate the promised technical specifications. Vendors may be required to give presentations.**
14. There are several items that require detailed information to be provided by the supplier. If information is not provided against any of these items, this will disqualify the supplier.
15. After technical evaluation by a committee, vendors may be asked to re-quote in a specific format to facilitate comparison of prices.
16. Price bids of only technically qualified vendors will be considered.
- 17. Prices to be quoted separately for the system with mandatory requirements and the optional items. Prices should be quoted in adequate detail with relation to packing details to cover insurance compensation in case of damage to any specific modules.**
18. Indicate separately the price of spares listed above in terms of unit cost. The price of these spares will be included in the price comparison. Any additional spares recommended by the

company will be considered for ordering but not included in the comparison. The buyer reserves the right to make the final decision on ordered spares.

19. IISc also reserves the right to cancel the tender at any time without assigning any reason whatsoever.
20. Indicate delivery period.
21. Order will be placed on lowest bid from technically qualified vendor.
22. The tender documents can be sent at the following address by 8th August 2023:

The Chairman
Department of Materials Engineering
Indian Institute of Science, Bangalore 560012
Karnataka
India