DEPARTMENT OF MATERIALS ENGINEERING
INDIAN INSTITUTE OF SCIENCE (IISc), BENGALURU, INDIA

Global Tender Notification for 1 KW Programmable Fibre laser.

(Last Date for Submission: January 30th, 2024)

GTE Approval No.: IISc-GTE-2023-313

Tender Notification Ref No.: MT/ENQ-GL-TNDR/SSU-CoE/23-24/01 **Date: 09th January 2024**

This is a **Request for Quote (RFQ)** for supply including Installation, Commissioning, and training at site for the **"1 KW Programmable Fibre laser"** at the **Department of Mechanical Engineering Indian Institute of Science, Bengaluru.** The tender should be submitted in two separate sealed envelopes: one containing the **technical bid** and the other containing the **commercial bid**, both of which should reach us, duly signed on or before **30th January 2024 on or before 1700 hrs.** The bids should be addressed to:

The Chair
Department of Materials Engineering
Indian Institute of Science
Bengaluru
Karnataka 560012,
India.
*Direct all questions concerning the acquisition to addresses to **Dr. Koushik Viswanathan** at*:
koushik@iisc.ac.in

The scope of the supply includes Installation, Commissioning and Training at site for the "1.5 KW programmable fibre laser".

Tender Summary

1	Tender number	***MT/ENQ-GL-TNDR/SSU-CoE/23-24/01***
2	Tender Date	***09.01.2024***
3	Item Description	1 KW Programmable Fibre laser
4	Tender Type	Two Bid System: (a) Technical Bid (Part A) (b) Commercial Bid (Part B)
5	Place of Tender submission	Prof. Satyam Suwas Chair, Department of Materials Engineering, Indian Institute of Science, Bangalore - 560012
6	Last date & Time for submission of tender	**30th January 2024 at 5.00 P.M**

General Terms and Conditions:

1. The bid should be submitted in two-cover system, i.e., technical bid and commercial bid separately in sealed covers. The technical bid should contain all commercial terms and conditions, except the price.
2. In the commercial bid, the price should be inclusive of all discounts.
3. The lead time for the delivery of the items should not be more than 16 weeks from the date of receipt of our purchase order. It should be clearly mentioned in the technical and commercial bids.
4. All the quotations must be valid for at least 90 days at the time of submission.
5. List of customers and references: It is preferable for the Bidder should have supplied similar equipment in centrally Funded Technical Institutes (IITs, IISC, IISER, NIT). Please provide the details and contact information.
6. The Bidder must not be blacklisted/banned/suspended or have a record of any service- related dispute with any organization in India or elsewhere. A declaration to this effect should be provided.
7. Items in addition to those listed in the technical table that you would like to bring to the attention of the committee, such as data sheets, technical plots etc. can be listed at the end of the compliance table.
8. Vendors are encouraged to highlight the advantage of their product over comparable products from the competitors.
9. If needed, a meeting for any technical clarifications can be scheduled with the undersigned by sending an email.
10. The Institute reserves the right to accept or reject any bid, or to annul the bidding process and reject all bids, at any time prior to the award of contract without thereby incurring any liability of the affected bidder or bidders.
11. After the award of purchase order, the vendor must provide an Order Acknowledgement within 30 days from the receipt of the Purchase Order.

The tender documents can be sent at the following address:

The Chairman
Department of Materials Engineering
Indian Institute of Science, Bangalore 560012
Karnataka (INDIA)

Technical requirements

Please note that the requirements listed below are only guidelines. It does not disbar bids that do not meet the criteria listed. Vendors are requested to quote for equipment that meet the criteria to the best extent possible and list deviations. Deviations are NOT an automatic reason for disqualification. They will be discussed by the technical committee prior to making an informed decision.

01. 1 KW Programmable Fibre laser

1	Laser type	Ytterbium fibre laser
2	Output power for continuous operation at collimator delivery end	1 kW ± 1 %
3	Power variation range	10 – 100% of maximum or better
4	Wavelength	1070 (nominal)
5	Emission line width	<10 nm
6	Polarization	Random
7	Mode of Operation	CW/modulated
8	Rise and Fall time	≤ 5µs
9	Beam shape	User programmable (SM/MM)
10	Beam quality	<0.5 mm mrad for SM <2 mm mrad for MM
11	Delivery fiber length	10mm or more
12	Extra requirements	Beam shape should be switchable on the fly
13	Output terminator/connector	QBH, 5 m length
14	Guide laser	~620 nm (red)
15	Operation Voltage	200 – 240VAC
16	Frequency	50Hz
17	Operating Temperature Range	+10 to 40 ºC
18	Operating Relative Humidity	10 to 80%
19	Remote Control interface	Hardware control (RS232 or equivalent) and software through GUI
20	Delivery Fiber	In case of damage to delivery fibre, laser system should have provision for change of delivery fibre by OEM authorized service engineer in India.
21	Safety Standard	The laser and its components should conform to relevant EN/ CE/ UL/ BIS regulatory standards for Safety and Emission
22	Installation & Commissioning	The installation of the laser will be carried out by the OEM/ Supplier at the user's site at IISc. Integration with an existing metal AM system will be undertaken under supervision/support from the OEM/supplier. User manual to be provided
23	Training at site	The supplier or their authorized representatives should impart training to IISc personnel.

24	Warranty	The OEM/supplier will extend the performance warranty of the supplied machine for day-today actual working conditions at user's site for a period of 12 months from the date of commissioning.

- Should have proven record of successful installations within Indian education/research institutes. Proof of such installation must be enclosed.
- The OEM/Supplier should have trained service engineers stationed in India for any on-site service requirement, details to be provided in the offer.
- OEM/supplier should have requisite stock of necessary spare parts in India.
- Company should have a minimum annual turnover of INR 5 crores.

TERMS AND CONDITIONS

1. Warranty period: 1 year.

2. Supplier Credibility:

   a. The Bidder/Vendor Must have supplied minimum 3 Laser optics and Delivery head to reputed Government Organizations in INDIA in the past 3 years. Copies of Purchase Orders to be enclosed along with the Technical Bid as proof.
   b. Supplier should compulsorily indicate details of facilities / expertise/ qualification of support staff in India. Factory trained engineer/s should be available in India for complete product support.
   c. Please enclose User list in INDIA.
   d. Minimum 3 Reference letters of similar system supplied in INDIA need to be submitted for further consideration.

3. Publications:

   a. As our Research Work is of critical nature, Vendors need to enclose reference publications/application note on the usage of "Laser optics and Delivery head" to show expertise of the product being offered.
   b. As a scope of future work, we intend to use planar measurements on the same set-up. Vendors can provide reference publications of using "Laser optics and Delivery head" (from same OEM).

4. Institute reserves the right for final selection of items.

5. Vendors may quote for any other items/accessories separately as "Optional Items".

For queries or clarifications, please contact:

Dr. Koushik Viswanthan at koushik@iisc.ac.in

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Annexure-I

Note: Compliance Certificate must be enclosed with the Technical bid. Non submission of Compliance Certificate will lead to disqualification of the bidder.

SNo	Description	Value	C	NC	D	Remarks
1	Laser type	Ytterbium fibre laser				
2	Output power for continuous operation at collimator delivery end	1 kW ± 1 %				
3	Power variation range	10 – 100% of maximum or better				
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5	Emission line width	<10 nm				
6	Polarization	Random				
7	Mode of Operation	CW/modulated				
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21	Safety Standard	The laser and its components should conform to relevant EN/ CE/ UL/ BIS regulatory standards for Safety and Emission				

C-Compliant, NC- Non Compliant, D- Deviation