

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

Tender Notification Ref No.: ME/ENQ/TNDR/KV/22-23/01

Date: 23.06.2022

The Department of Mechanical Engineering (ME), Indian Institute of Science Bengaluru, invites tenders for supply of “**1.5 KW fibre laser**”. This Invitation for Bids is open to all vendors global. **The scope of the supply includes Installation, Commissioning and Training at site for the “1.5 KW fibre laser”.**

Tender Summary

1	Tender number	ME/ENQ/TNDR/KV/22-23/01
2	Tender Date	23.06.2022
3	Item Description	1.5 KW Fibre laser
4	Tender Type	Two Bid System: (a) Technical Bid (Part A) (b) Commercial Bid (Part B)
5	Place of Tender submission	Dr. Koushik Viswanathan Assistant Professor Department of Mechanical Engineering Indian Institute of Science, Bengaluru 560012
6	Last date & Time for submission of tender	13 th July 2022 & 5.00 P.M
7	Validity of the quotation	120 days

The quotations should be quoted on CIP Bengaluru Basis, should clearly indicate the terms and conditions of delivery, delivery schedule, entry tax, payment terms, warranty coverage etc.

The quotation should be submitted in two parts:

Part 1: Technical Bid

Part 2: Commercial Bid/Financial Bid

The tenderer should submit the bids separately in sealed envelope super scribing the envelope as Technical Bid and Commercial Bid (Financial Bid). Both these envelopes should be put in a single envelope and to be super scribed as “ME/ENQ/TNDR/KV/22-23/01 1.5KW Fibre Laser”

DEPARTMENT OF MECHANICAL ENGINEERING
INDIAN INSTITUTE OF SCIENCE (IISc), BENGALURU, 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.

1	Laser type	Ytterbium fibre laser
2	Output power for continuous operation at collimator delivery end	1.5 kW \pm 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	\leq 5 μ s
9	Output power instability over 8 hours' operation	within \pm 2.0 %
10	Delivery fiber core diameter	\leq 100 μ m
11	Beam parameter product	For 100 μ m fiber \leq 4.0mm-m
12	Delivery fiber length	10mm or more
13	Extra requirements	Hardware-based back reflection protection for use with reflective materials (Cu, Al).
14	Output terminator/connector	QBH
15	Guide laser wavelength	\sim 620 nm (red)
16	Operation Voltage	200 – 240VAC
17	Frequency	50Hz
18	Operating Temperature Range	+10 to 40 $^{\circ}$ C
19	Front Panel Controls	10 to 80%
20	Remote Control interface	analog control, trigger, safety interface, RS 232 interface for communication
21	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.

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

22	Safety Standard	The laser and its components should conform to relevant EN/ CE/ UL/ BIS regulatory standards for Safety and Emission
23	Installation & Commissioning	The installation of the laser will be carried out by the Supplier at the user's site at IISc. Integration with an existing metal AM system will be undertaken under supervision/support from the supplier. User manual to be provided
24	Training at site	The supplier or their authorized representatives should impart training to IISc personnel.
25	Warranty	The 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.

SPECIFIC TERMS AND CONDITIONS

The following requirements should be specifically adhered to by the vendor, and express indication should be given regarding adherence.

1. **GUARANTEE PERIOD**: The equipment should be guaranteed for a period of 12 months from the date of handing over the fully functional unit to the Institute, against manufacturing defects of material and workmanship.
2. **CUSTOM CLEARANCE**: The Institute will furnish the necessary papers for the import of items into India, necessary custom duty exemption certificate and other supporting documents to facilitate the import of the items. Note: Institute has got into an agreement with **M/S East West Freight forwarders for custom clearance** of all imported equipment to the Institute.
3. **MODE OF SHIPMENT**: The consignment must be air-lifted, insured and transported to the installation site by the supplier.
4. **PAYMENT TERMS**: As per Standard terms agreed.

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

5. **COMPLIANCE CERTIFICATE:** Enclose compliance certificate along with Technical Bid having details regarding Compliance, Non-compliance, Deviations if any and reasons for deviation in comparison with the Technical Specifications mentioned in this notification.

TERMS AND CONDITIONS FOR SUBMISSION OF BIDS

Both the Technical and Commercial bid should be put in separate sealed envelopes and both the envelopes should be put in another cover subscribing “**ME/ENQ/TNDR/KV/22-23/01 1.5KW Fibre laser**” and should reach “The Chair, Department of Mechanical Engineering, IISc, Bengaluru-560012” on or before **13.07.2022**.

The Technical bid must include all the details of technical specifications of the equipment, compliance certificate along with commercial terms and conditions, however, without the price component. The bill of materials printed technical brochure and any other documents to help the technical evaluation of the bid may be enclosed.

1. The commercial bid must include the price of the item(s) in Indian/Foreign currency indicating the breakup of

(a) For Goods manufactured within India

- (i) The price of the goods quoted Ex-works including taxes already paid.
- (ii) GST and other taxes like excise duty, entry tax and other applicable taxes which will be payable on the goods if the contract is awarded.
- (iii) The charges for inland transportation, insurance and other local services required for delivering the goods to IISc, Bangalore.
- (iv) The installation, commissioning and training charges including any incidental services, if any with applicable service taxes.

(b) For Goods manufactured abroad

- (i) The price of the goods should be quoted on CIF/DAP Bangalore, India basis.
- (ii) The charges for insurance and transportation of the goods by Air/Sea up to Bangalore, India.
- (iii) The agency commission charges, if any.
- (iv) The installation, commissioning and training charges including any incidental services, if any.

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

2. The invoice to be billed at applicable GST and for concessional GST rates, GST concession certificate(s) shall be provided.
3. Please indicate the import code of the items.
4. Goods found to be defective by the committee during installation and warranty have to be replaced / rectified. Items found not acceptable or missing have to be replaced / rectified. Replacement of parts to be at the cost of the supplier (including all incidental charges), within 15 days from the date of receipt of written communication from us. If there is any delay in replacement / rectification, the warranty period should be correspondingly extended.
5. The terms FOB, FCA, CIF, CIP, etc., shall be governed by the rules prescribed in the current edition of the Incoterms published by the International Chambers of Commerce, Paris.
6. The purchases made by the purchaser for scientific purpose are exempt from excise duty and Custom Duty at a concessional rate is leviable.
7. Conditional tenders shall not be accepted.
8. Bids shall remain valid for minimum of 120 days after the date of bid opening prescribed by the Purchaser.
9. The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders.
10. Onsite inspection of the machine will be done by IISc before the dispatch at IISc cost.

Other Terms

- The cost of the Multicomponent Dynamometer and that of each equipment/accessory to be quoted separately.
- The vendor must submit a signed compliance document mentioning whether their equipment meets each and every specification detailed above.
- The award of the tender will be decided by the institute as per price of the complete system. All insurance charges shall be borne by the vendor.
- Technical and financial bids should be submitted separately.
- All prices of the Multicomponent Dynamometer and accessories should be quoted in currency of respective country of origin of the equipment.

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

- The specifications mentioned shall be understood to be the minimum required. Additional technical and research features suitable to our requirements shall be given due reference.
- Vendors that submit qualifying technical and financial bids are required to send competent representatives from the sales and technical divisions for further negotiations.

All Communications in this regard should be addressed to;

The Chair,
Department of Mechanical Engineering
Indian Institute of Science
Bengaluru 560012, India.
With attention to: Dr. Koushik Viswanathan
Email to: koushik@iisc.ac.in

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

Annexure-I

Sl. No	Description	Value/Range	C	NC	D	Remarks
1	Laser type	1.5 kW \pm 1 %				
2	Output power for continuous operation at collimator delivery end	10 – 100% of maximum or better				
3	Power variation range	1070 (nominal)				
4	Wavelength	<10 nm				
5	Emission line width	Random				
6	Polarization	CW/modulated				
7	Mode of Operation	$\leq 5\mu\text{s}$				
8	Rise and Fall time	within ± 2.0 %				
9	Output power instability over 8 hours' operation	$\leq 100 \mu\text{m}$				
10	Delivery fiber core diameter	For 100 μm fiber $\leq 4.0\text{mm-m}$				
11	Beam parameter product	10mm or more				
12	Delivery fiber length	Hardware-based back reflection protection for use with reflective materials (Cu, Al).				
13	Extra requirements	QBH				
14	Output terminator/connector	~ 620 nm (red)				
15	Guide laser wavelength	200 – 240VAC				
16	Operation Voltage	50Hz				
17	Frequency	+10 to 40 $^{\circ}\text{C}$				
18	Operating Temperature Range	10 to 80%				
19	Front Panel Controls	analog control, trigger, safety interface, RS 232 interface for communication				
20	Remote Control interface	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	Delivery Fiber	The laser and its components should conform to relevant EN/ CE/ UL/ BIS regulatory standards for Safety and Emission				
22	Safety Standard	1.5 kW \pm 1 %				

C-Comply, NC- Non Comply, D- Deviation

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

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