



Ministry of Culture
Government of India



National Council of Science Museums

33 Block GN, Saltlake Sector V

Bidhannagar, Kolkata 700 091

I-18012/8/23(85)

Technical Specification

1. Supply, Installation, Testing & Commissioning of Laser Welding Machine (Fiber Laser) with accessories and feeding wires

Specifications of Fiber Laser Welding Machine with accessories:	
Name	Handheld fiber laser welding machine
Usage/Application	Metal Laser welding
Output Power	≥ 2000 Watt
Welding Materials	Stainless steel, Galvanized steel, Brass, Aluminium, Carbon steel, Cast Iron.
Laser wavelength	1094 Nanometer
Laser head type	Hand-held Intelligent Wobble welding head (Three transformable form of heads for welding, cutting and cleaning operations)
Welding Gun	Oscillating mirror gun for perfect welding, with laser diode red light indication (CCD) One click operation Possibility to work with filling material if necessary
Laser quality	Highly stable imported quality laser source (100,000h)
Laser pulse energy	≥ 100J
Welding thickness	≥ 6 mm *(will be audited)
Cleaning Thickness	≥ 80 mm *(will be audited)
Working Temperature	5-40 degree

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Power stability	≤ (± 2%)
Welding speed	0-120mm/s
Automation Grade	Fully Automatic
Welding Wire feeding	Fully Automatic, various diameters support, adjustable output speed, effective welding assistant.
Diameter of auto feeding wire	0.8-1.2 mm
Cooling mode	Water cooling
Water Chiller	Inbuilt model
Output Current	0-100 A
Frequency	50-60Hz
Fiber cable length	≥ 10 meters
Phase	Three Phase
Voltage	220-240 V 50 Hz
Warranty	03 years (1year standard+2years extended) on entire machine components including laser source
Service Center	Must have authorized office/service center in Eastern zone of India, preferably in Kolkata (West Bengal)
Working modes	Dot, line, circle etc. (6 standard synergic modes)
Pressure alarm system	Yes
Weight & structure	≥ 250 kg The Machine must have wheels with brakes at the base to facilitate the movement of the machine.
Additional features	<ol style="list-style-type: none"> 1. Machine should be ready to connect with robot. 2. Manual surface hardening 3. Manual welding bead cleaning 4. Interchangeable nozzles for different type of welds
Control Panel	≥ 7" Touch screen with quick and easy operation
Accessories to be included	<ol style="list-style-type: none"> 1. Feeding wire rolls: <ol style="list-style-type: none"> i) Mild steel- 1.2mm, 1.6mm (15kg each roll) ii) Stainless steel- 0.8mm, 1.2mm (12.5kg each roll) iii) Aluminium 1.2mm (7kg- 02 rolls) 2. Standard tool kit - 01 set 3. Protective lens- 05 Nos. 4. Nozzle- 05 Nos. 5. Regulator- 01 No.

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	6. Auto darkening helmet- 02 Nos. 7. Protective focusing lens- 03 Nos.
Training	Minimum 03 consecutive days or till the operation of the machine strictly as per the clause 07 of GTC

Make & Model offered: _____

To be entered by bidder

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