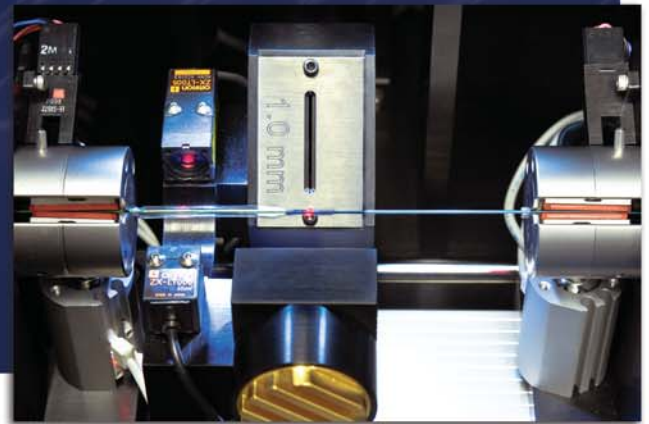
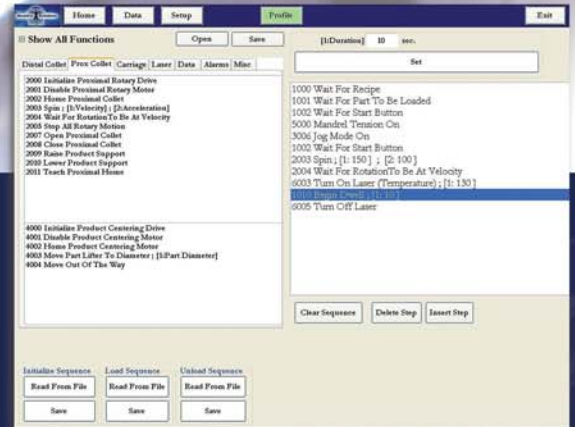


# LB1000

## Laser Bonding Equipment



The MSI LB1000 Laser Bonding Equipment provides superior process control and feedback through the use of a closed-loop control system featuring integrated infrared temperature and laser power sensors. The ability to control CO<sub>2</sub> laser wattage or bond site temperature creates an accurate and repeatable process cycle to cycle and machine to machine. The LB1000 also features a user defined beam width configured in a column shape rather than a single spot. This allows the beam to consistently contact the product even with bent mandrels.

The LB1000 includes a PLC control system with user friendly PC touch screen interface for easy process development and product changeover. The process sequence builder is extremely flexible allowing the user to tailor the process to match specific bonding needs. Additional user friendly features include drop-in product handling, bar code scanning, integrated vision assist and jog controls for easy bond site alignment to the laser column. Applications include proximal/distal balloon bonds, soft tip attachment and other catheter/tube bonding processes.

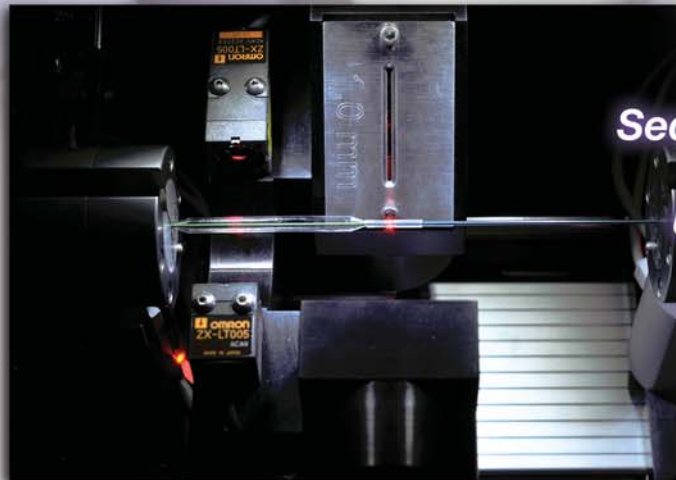
### **LB1000 Features**

- **Closed-loop temperature and power control.**
- **Drop-in product loading.**
- **Cycle data acquisition and networking capabilities.**
- **Flexible process setup and control.**
- **Column shaped beam with user defined width.**



# LB1000

## Laser Bonding Equipment



*Sequence driven process*

*User defined beam width*

*Adjustable beam delivery*

### Summary of Spec Data

<i>Power Requirements</i>	220 VAC
<i>Pneumatic Requirement</i>	100 psi
<i>Laser Type</i>	Infrared CO <sub>2</sub> , 30 watt, 10.6µm wavelength
<i>Closed Loop Temperature Control</i>	±3°C
<i>Closed Loop Laser Power Control</i>	±3%
<i>Product Traverse Rate</i>	0 – 21.7"/sec (0 - 550 mm/sec)
<i>Product Rotation Rate</i>	0 – 500 rpm
<i>Max Product Travel</i>	12.0" (305mm)
<i>Tubing Diameter Range</i>	0.004 - 0.118" (0.1 - 3.0mm)
<i>Profile Storage Capacity</i>	Unlimited
<i>General Warranty</i>	1 Year

*This product conforms to the requirements of 21 CFR Subchapter J, and IEC (EN) 60825-1, ed 2, as applicable.*

### LB1000 Equipment Specifications

#### *Process Controls*

- Closed loop IR sensor for temperature control.
- Closed loop power sensor for laser output control.

#### *Product Handling*

- Servo motor controlled product handling system.
- Drop-in, top loading rotational product handling.
- Fully enclosed shielded machine base designed and built for laser safety.
- Automated product alignment system option.

#### *Control System*

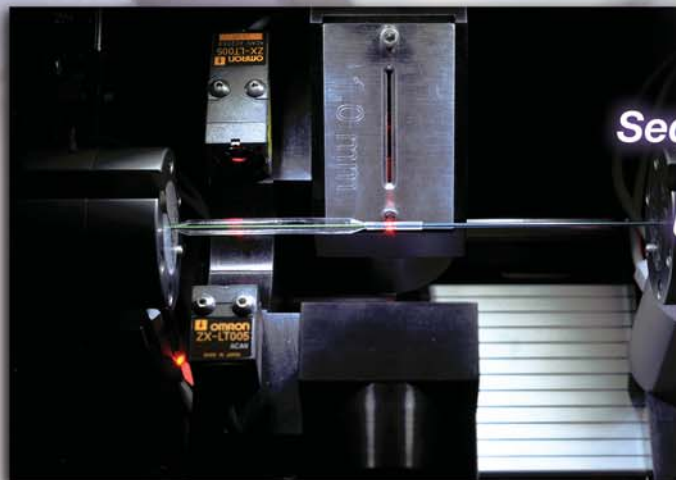
- PLC control system.
- 19" touch screen PC interface.
- Programmable parameters: temperature, laser power, bond time, rotational speed, traverse distance and rate.
- Easy step by step profile programming.
- Cycle data acquisition with networking capability.
- Graphical and Excel file output.
- Unlimited profile storage capacity.
- Multi level password protection.

### Machine Dimensions

- **Shipping Weight: 700lbs (318kg)**
- **Machine Weight: 525lbs (238kg)**
- **Height: 50" (1270mm)**
- **Width: 48" (1219mm)**
- **Depth: 30" (762mm)**

# LB1000

## Laser Bonding Equipment



*Sequence driven process*

*User defined beam width*

*Adjustable beam delivery*

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