



LBS6000 CATHETER LASER BONDER

EQUIPMENT

LBS6000 catheter laser bonders combine the functionalities of LBS4000 and LBS5000 models yet provide better ergonomics and laser safety as well as additional functions such as motorized revolving safety door, advanced in-step air cooling, ball screw actuator, integrated diode pointer and beam shutter, redesigned beambender block, and multiple choice of sample holding system configurations. With LBS6000 laser bonders, customers continue to enjoy the stability and reliability of previous models. Yet experience the advanced hardware and software features process engineers keen to have.



Figure 1 LBS6000 Balloon Catheter Laser Bonder

FEATURE

Laser and Beam Delivery System

- 10W closed loop CO2 laser with 2% power stability. Water cooling ready
- Programmable beam shutter eliminates power surge
- Integrated red diode pointer and beam shutter
- Redesigned beambender block for easy beam tuning
- Fast lens positioning
- Spot out of spec warning
- Improved power calibration accuracy with non-linear modeling
- Auto power calibration
- Support parallel beam with beam expander and adjustable beam mask

Laser Actuator

- Ball screw actuator
- 350 travel distance

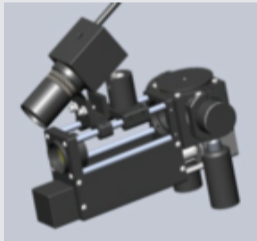


Figure 2 Programmable Spot Beam Delivery System



Figure 3 Highly dynamic Window based user interface

Sample Holding System

- Direct drive spindle with servo motor
- Higher torque, quiet move, precise speed control
- Multiple choices of spindle configurations
- Automatic spindle recognition
- Multiple choice of holding chucks
- Redesigned multi-slot segmented chucks



Figure 4 Easy to use programming interface

Machine Vision System

- HDMI video camera and cross hair generator
- Up to 8 cross hair lines (4 horizontal and 4 vertical)
- Easy adjustment for line positions
- 15" or larger HD monitor

User Interface and Control System

- 7" or larger high resolution touch screen HMI
- Easy to use serial programming interface
- Save up to 1000 recipes in HMI, support unlimited recipes with USB backup/restore functionalities

Safety and Ergonomics

- True class I safety enclosure with revolving safety door
- Ergonomic layout of monitor and operator panel
- Exponential joystick speed adjustment for both precise position control and high speed move

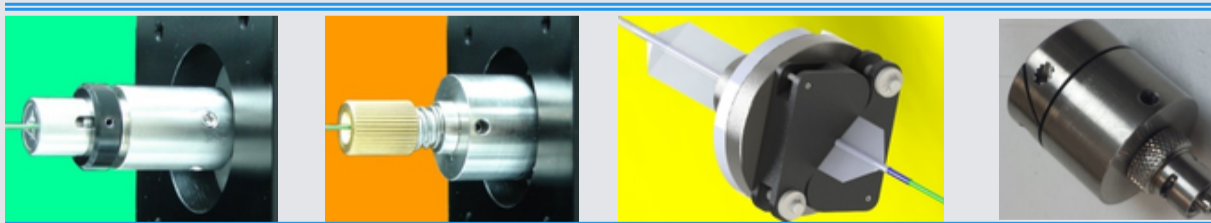


Figure 5 Choices of holding chucks

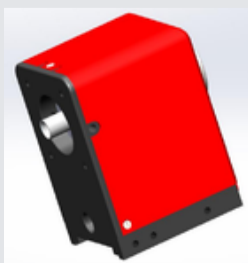


Figure 6 Direct drive spindle

Multi-slot segmented chuck

- No need to find slot position.
- 0-1/4" opening.
- Easy sample loading/unloading.
- Reliable open/close actions.

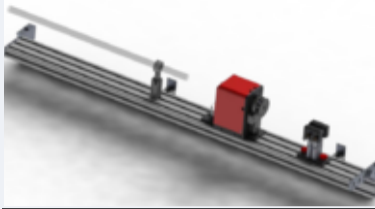


Figure 7 Multi-slot segmented chuck with 0-1/4" opening

LBS6000 SAMPLE HOLDING SYSTEM CONFIGURATIONS



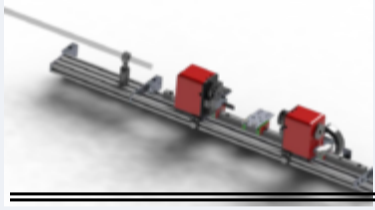
CONFIG #1: Spindle on the right side, clamp on the left side. Recommended to use with catheters with short to medium length balloons. Any types of chuck can be installed on the spindle. The chuck will hold the distal end of the support mandrel and rotate. Clamp will hold the proximal side of the balloon as a guide. Allow quick drop loading.



CONFIG #2: Spindle on the left side, clamp on the right side. Recommended to use with catheters with short to medium length balloons and non-circular shaft tubing. Recommend to use segmented or touhy borst chucks on the spindle. The chuck will hold the proximal side of the balloon and rotate. Clamp will hold the distal end of the support mandrel.



CONFIG #3: Spindle on the left side, dual clamps on each side of the balloon. Recommended to use with catheters with short to long length balloons and long shaft. Recommend to use the segmented or touhy borst chucks on the spindle. The chuck will hold the proximal end of the catheter. Clamps will hold both proximal and distal end of the balloon. Allow drop-in loading, efficient and precise.



CONFIG #4: Dual spindle for holding catheters with built in guide wire or without through inner lumen, or for long and large size catheters. OTHER CONFIGURATIONS: More configurations are possible, for example, by using more than two clamp for long and thicker catheters to prevent excessive wobbling.

LBS6000 LASTER BONDER FEATURE COMPARISONS

FEATURES \ MODELS	LBS6100	LBS6200	LBS6300
10WCO ₂	√	√	√
Closed Loop Laser with 2% Stability	√	√	√
Real Time power Display	√	√	√
Electronic Shutter to eliminate power surge	√	√	√
Auto Power Calibration Software Module	√	√	√
Configurable sample holding system	√	√	√
Support catheter drop loading/unloading	√	√	√
Standard configuration: Catheter clamp + direct drive spindle	√	√	√
Dual direct drive spindles	optional	optional	optional
Multiple catheter clamps	optional	optional	optional
Laser Move Delivery System:Expanded Parallel Beam	√	N/A	N/A
Laser Move Delivery System:Manual Focused beam	N/A	√	N/A
Laser Move Delivery System:Programmable Spot with Motorized Lens	N/A	N/A	√
7" High Resolution Touch Screen Controller	√	√	√
Multi Language Support	√	√	√
Built-in Cross Hair Generator	√	√	√
Machine Vision System with built-in 15" LCD Monitor	√	√	√
Automatic Recipe Selection with Barcode Scanner	optional	optional	optional
Process and Calibration Data Reporting to PC	√	√	√
Powered Safety Door Open/Close	√	√	√
Serial Multi -Step Bonding Recipe Interface	√	√	√
Free Tech Support	√	√	√
Life Time Software Update	√	√	√

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