

# Laser Stent & Tube Cutter

## Sigma™ Series



- Fiber and femtosecond lasers
- 3 and 4 axis motion options
- 0.2 to 25 mm tube diameters
- Wet and dry cutting
- Automated tube loader option
- 22 in touch screen GUI on swing arm
- Material thickness to 1 mm

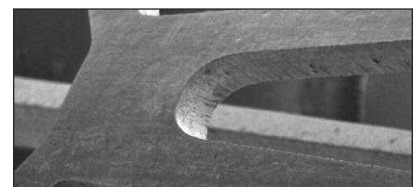
### TYPICAL APPLICATIONS



*Large diameter biopsy device*



*Flexible tubing*



*Metal stents*



*Micro cannula*

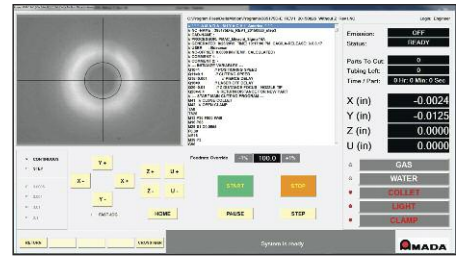


*Capsule*

- **Maximize throughput with high speed direct drive stages** - Integrated X and theta “lathe” axes are direct drive technology with high dynamic precision performance delivering the highest accelerations and operating speeds
- **Multi axis options** - The tube cutter provides 3 axes as standard; X, theta, and Z. A fourth optional transverse axis, Y, is available for off axis cut geometries.
- **Designed for precision** - The lathe stages are mounted directly to a composite base with vertical and transverse stages mounted to a composite gantry secured to the composite base. The composite material construction provides superior rigidity with vibration dampening. Linear motors combined with high resolution linear encoders precisely position the X and Y axes.
- **User interface with integrated camera** - Large Windows® format user screens display comprehensive machine status with easy to use functionality. The camera image integrated to the user screen provides inline through-the-lens viewing.
- **Wet and dry operation** - Standard, integrated water system with flow rate control, level sensors and easily changed filters. The lathe stages, rated IP54, and all connections are sealed for reliable wet operation.
- **Enclosure features and safety** - The CDRH Class 1 workstation enclosure includes ISO 13849-01 Category 3 safety interlocks. The interlocked full front door lifts easily vertically to provide full access to tooling, focus head, and stages. A smaller window door slides horizontally maximizing operator productivity.



- All-in-one main run screen provides full view of machine status
- Entire front door lifts up for full access to tooling, tubes and stages
- Smaller sliding laser safe window for quick part access
- Major subassemblies on drawer slides for easy maintenance
- Jog axis using touch screen buttons or jog mouse
- Standard and custom part tooling options



### TECHNICAL SPECIFICATIONS

Laser and Motion Parameter	Specification
Laser	Yb: fiber laser, 200 or 500 Watts Femtosecond laser up to 40 W; IR, green and UV wavelengths
Beam diameter	Minimum 12 microns with 50 mm lens
Collet	Standard: 5C options: 1C or ER40
Linear X Axis	
Travel	375 mm
Accuracy / repeatability	+/- 5 µm   +/- 2 µm
Rotary axis	
Encoder resolution	1.1 arc sec
Linear Z axis	
Travel	50 mm
Linear Y Axis (Optional)	
Travel	50 mm
Accuracy / repeatability	+/- 5 µm   +/- 2 µm
Input power	208-240 VAC 50-60 Hz, single phase, 30 Amps

### WEIGHT & DIMENSIONS

Size (H x W x D) does not include light tower and user interface	77 in x 31 in x 60 in (1960 mm x 790 mm x 1525 mm)
Weight	3000 lb (1360 kg)



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