

# ULTRA X6000 ADVANCED LASER SYSTEM

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The ULTRA X6000 is a high-precision laser material processing system designed for demanding and complex applications in manufacturing, prototyping, and research and development environments.

It delivers a higher degree of accuracy, repeatability, and efficiency than other methods available today as well as offers an extensive set of advanced features and capabilities to achieve impeccable quality on the broadest range of materials. The ULTRA X6000 laser system addresses virtually any material challenge in one system.



ULTRA X6000

## ULTIMATE MATERIAL PROCESSING FLEXIBILITY

The ULTRA X6000 laser system supports three different laser wavelengths (10.6, 9.3 and 1.06  $\mu\text{m}$ ) and laser power from 10 to 300 watts CO<sub>2</sub> and 50 to 300 watts fiber. Additionally, with the patented Multi-Wave Hybrid™ technology, multiple laser beams of various wavelengths and power can be combined into a single coaxial, hybrid laser beam.

This unique capability enables matching of available laser energy with absorption characteristics of a material to deliver the most optimal and consistent results.

With Multi-Wave Hybrid™ technology, you can:

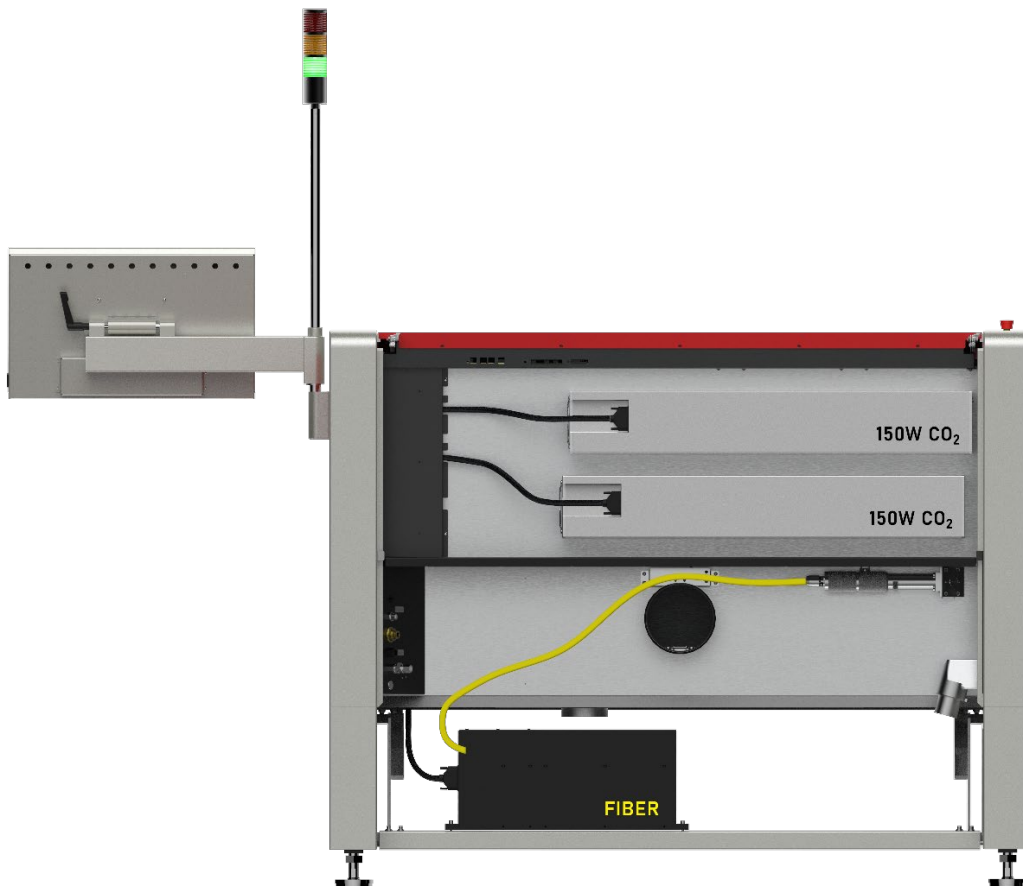
- Select the ideal laser wavelength and power to process a single material or multiple homogenous materials in a production cycle.
- Simultaneously combine more than one wavelength and power level to efficiently process composites including metals.
- Precisely process a target layer of a multilayer material without affecting other material layers.

## KEY FEATURES AND CAPABILITIES

- 36 x 24 in (914 mm x 610 mm) Material Processing Area
- Supports material thickness up to 12 in (305 mm)
- Supports up to (2) CO<sub>2</sub> laser sources and (1) fiber laser
- Camera Registration
- Automation Interface
- Patented Controllable Power Density Optics
- Precision Material Independent Autofocus
- Programmable Gas Assist
- Laser System Manager control software
- Intelligent Materials Database
- 21 in (533 mm) Touch Screen Control Panel
- Rapid Reconfiguration™ technology

### *Configuration Components Available*

- Patented SuperSpeed™ technology
- Fire Suppression Assistance Module
- UAC 4000 Air Filtration



*Multiple wavelength configuration with 300 watts CO<sub>2</sub> and 50 watts fiber*

## SPECIFICATIONS\*

<b>Material Processing Envelope (X,Y,Z)</b>	36 x 24 x 12 in. (914 x 610 x 305 mm)
<b>Minimum Addressable Beam Positioning</b>	2 micron (.00008 in.) beam position addressability
<b>Mechanical Beam Positioning Repeatability**</b>	± 10 micron (.00039 in.) repeatability
<b>Maximum Positioning Speed</b>	175 in./sec (4445 mm/sec)
<b>Maximum Effective Raster Processing Speed</b>	Equivalent to more than 300 in./sec (equivalent to more than 7620 mm/sec); <i>Requires SuperSpeed™ configuration</i>
<b>Maximum Functional Vector Processing Speed</b>	Equivalent to more than 40 in./sec (equivalent to more than 1016 mm/sec)
<b>Multiple Laser Support</b>	Up to (2) CO <sub>2</sub> laser sources and (1) permanently mounted fiber laser source; <i>Supports Rapid Reconfiguration™ of CO<sub>2</sub> lasers</i>
<b>Wavelengths / Laser Sources Available</b>	10.6 μm CO <sub>2</sub> : 10, 30, 40, 50, 60, 75 and 150 watt laser sources 9.3 μm CO <sub>2</sub> : 10, 30, 50, 75 and 125 watt laser sources 1.06 μm Fiber: 50 and 300 watt laser sources
<b>Maximum Laser Power</b>	300 watts CO <sub>2</sub> , 300 watts fiber
<b>System External Dimensions</b>	Width: 63.40 in. (1611 mm) with Control Panel folded 86.25 in. (2191 mm) with Control Panel extended  Depth: 50.25 in. (1277 mm)  Height: 48.00 in. (1220 mm) to top of enclosure 75.00 in. (1905 mm) to top of Light Tower
<b>Weight</b>	550 lbs. (250 Kg)
<b>Power Requirements</b>	220V-240V/20A (300 watt configuration requires high power kit and 30A)

