ADVANCED
MANUFACTURING
SOLUTIONS

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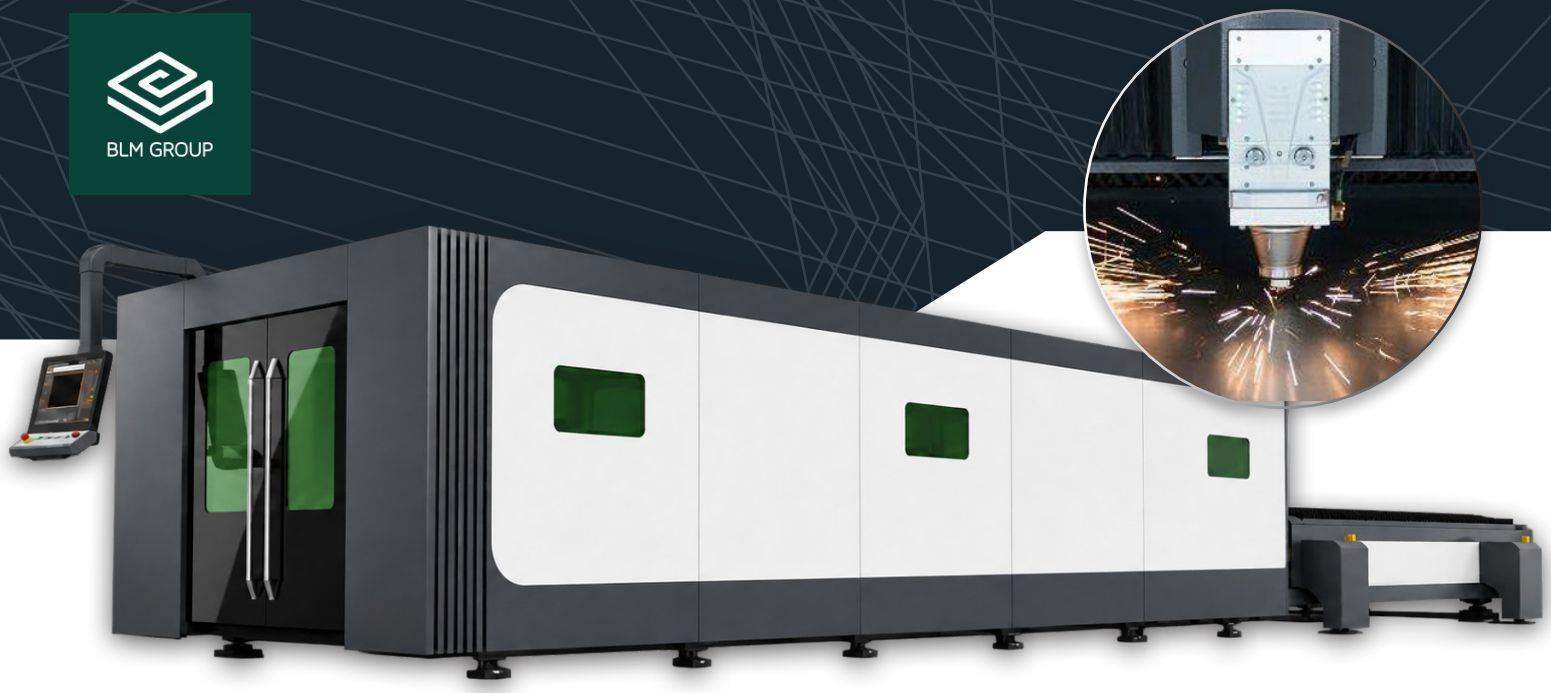
CENTRA

Precision, Productivity and Flexibility in Fiber Laser Cutting.

ACS. Delivering Integrated Advanced Industrial Manufacturing Technologies.



BLM CENTRA

The CENTRA is a versatile, high-performance fiber laser cutting solution designed for fabricators seeking advanced cutting capabilities, increased productivity, and flexibility across a wide range of materials and thicknesses. Combining high-speed laser technology, robust machine construction, and precision motion control, the CENTRA delivers reliable performance for demanding sheet metal fabrication applications.

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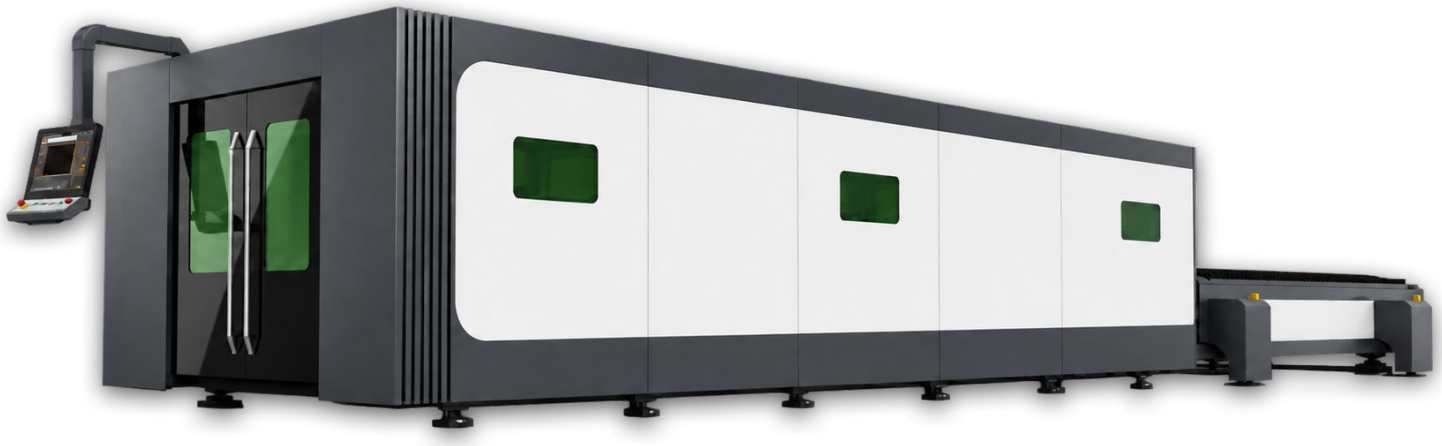
Precision, Productivity and Flexibility in Fiber Laser Cutting.



The **CENTRA** is a versatile, high-performance fiber laser cutting system available in **3015, 4020, 6020 & 8025 formats**. Featuring dual shuttle tables, Beckhoff CNC control, laser powers up to 30 kW, and optional automatic nozzle changing, the **CENTRA** delivers precision and productivity for demanding fabrication applications.

Designed for scalable automation, the **CENTRA** supports automated material handling systems that can be integrated during initial installation or added later, allowing fabricators to expand production capabilities as their needs grow.

Laser Power	Sheet Formats	Nozzle Changing	Automation
Up to 30kW	5’ x 10’, 6.5 x 20’ & 8’ x 26’ 3015 | 4020 | 6020 | 8025	5 or 9 Stations	Install Now or Later Expandable material handling

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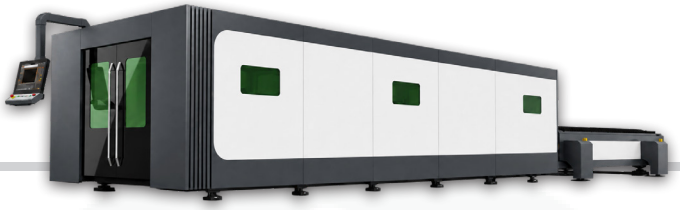

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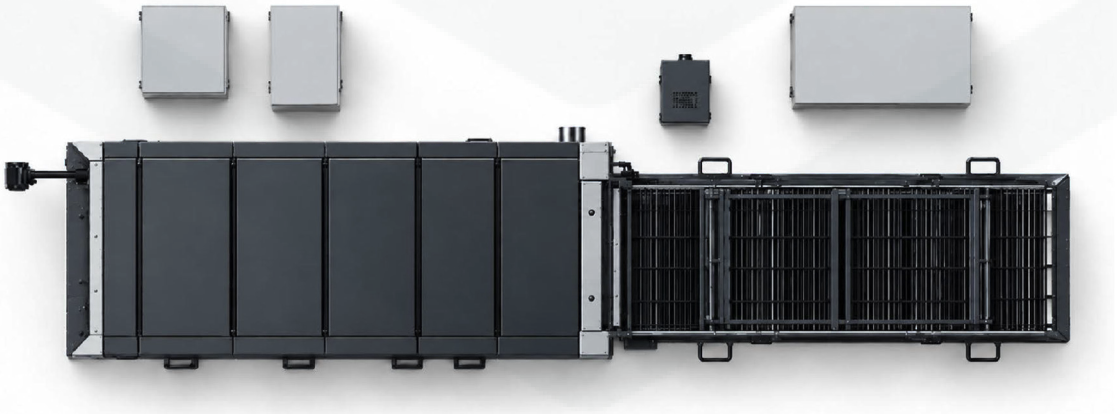
Technical Specifications

	3015	4020	6020
CUTTING CAPACITY			
Flat sheet dimensions	10′ × 5′ 120″ × 60″ | 3050 × 1530 mm	13′ × 6′ 159″ × 79″ | 4050 × 2030 mm	19′ × 6′ 238″ × 79″ | 6050 × 2030 mm
Laser power (kW)		6, 12, 20, 30	
MOTION & PRECISION			
Axis travel · X	120″ | 3050 mm	159″ | 4050 mm	238″ | 6050 mm
Axis travel · Y	60″ | 1530 mm	79″ | 2030 mm	79″ | 2030 mm
Axis travel · Z		5.7″ | 145 mm	
Acceleration	1.73G 55 ft/s² | 17 m/s²		1.5G 49 ft/s² | 15 m/s²
Axis speed X, Y simultaneous		5,511″/min | 140 m/min	
Positioning accuracy		0.0039″ | 0.1 mm	
CONTROL SYSTEM			
Controller		21″ Touchscreen	
Positioning system		Servo Motor / Rack and Pinion	
PALLET & MATERIAL HANDLING			
Pallet table change time	27 seconds	35 seconds	45 seconds
Pallet table working height		38.7″ | 985 mm	37.59″ | 955 mm
Max. sheet weight on pallet	4,409 lb | 2,000 kg	7,716 lb | 3,500 kg	13,277 lb | 6,000 kg

Footprint



3015	4020	6020
LENGTH × WIDTH	LENGTH × WIDTH	LENGTH × WIDTH
32′ × 16′	40′ × 18′	52′ × 18′
10 m × 5 m	12 m × 5.5 m	16 m × 5.5 m

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Main Components



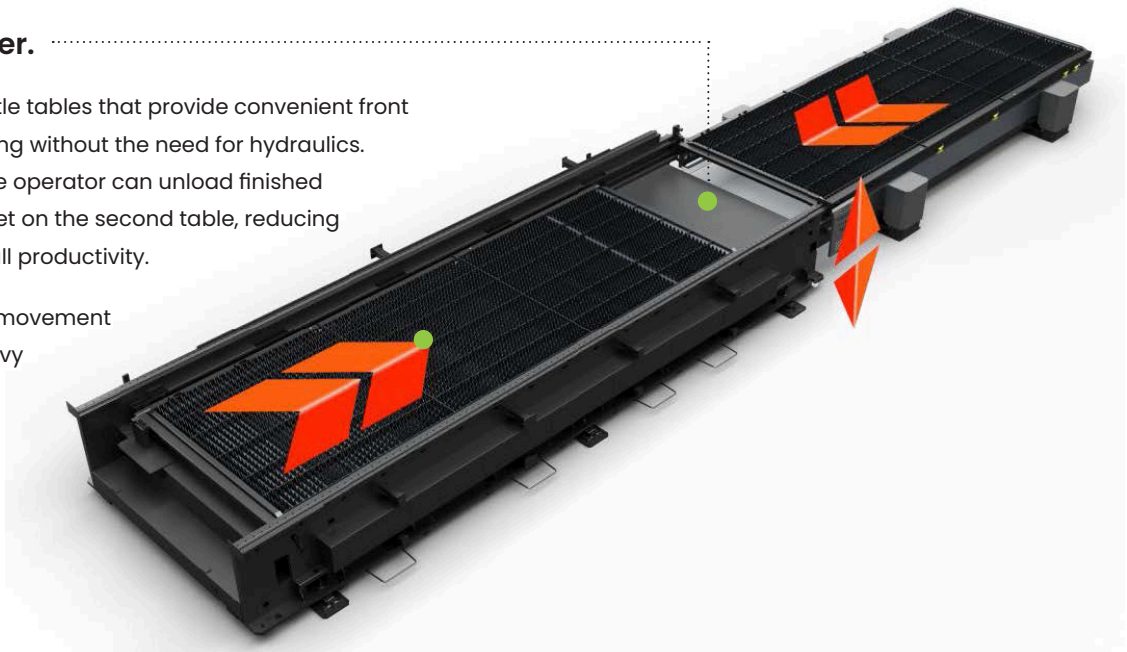
1. Machine Cabin 2. Pallet Exchange Table 3. Operator console 4. Laser (12kW) 5. Chiller 6. Dust Collector
7. Electrical Cabinet 8. Scrap Trays 9. Hydraulic unit (Pallet Changer Raise/Lower)

Dual Pallet Tables

One Sheet After Another.

The **CENTRA** features dual shuttle tables that provide convenient front access for loading and unloading without the need for hydraulics. While one sheet is being cut, the operator can unload finished parts and prepare the next sheet on the second table, reducing downtime and improving overall productivity.

Hydraulics provide the vertical movement providing the capability for heavy plate processing.



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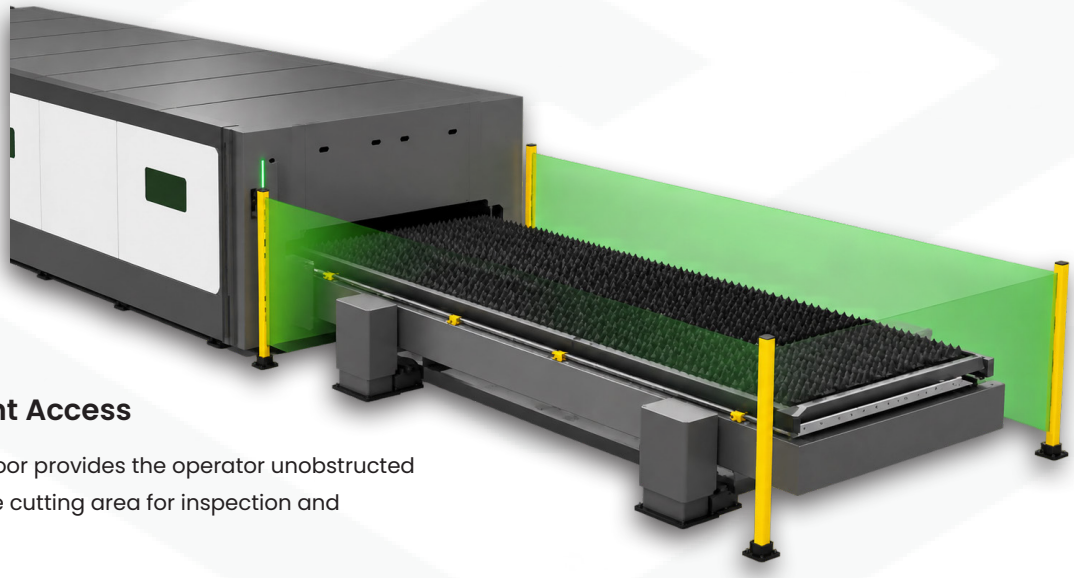
Simple. Centralized. Intuitive.

Safety & Access

Operator Protection.

A standard light curtain safety system protects operators while maintaining convenient access to the shuttle tables.



Convenient Access

A large front door provides the operator unobstructed access into the cutting area for inspection and maintenance.

Intuitive Operator Console

The 21" touchscreen HMI provides centralized control of machine operations from a single operator station. Operators can easily access cutting programs, view part previews and nesting layouts, edit programs, and adjust cutting parameters directly at the machine, simplifying operation and improving productivity.





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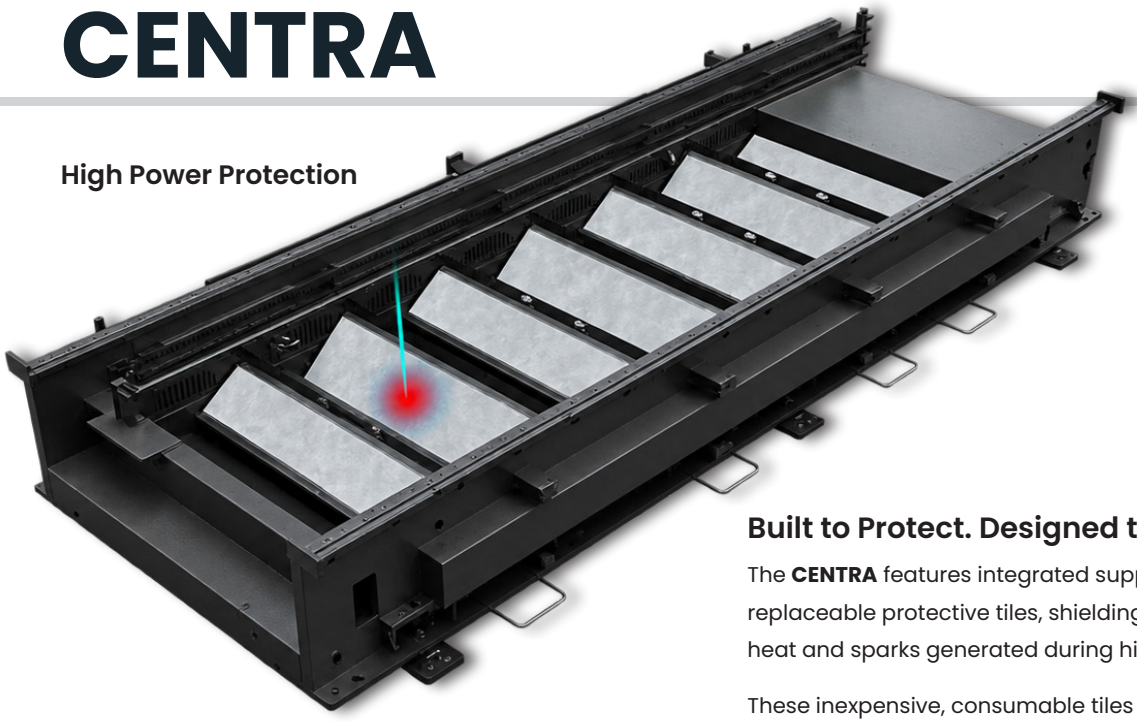
High Power Protection



- 20 and 30kW only

Built to Protect. Designed to Last.

The **CENTRA** features integrated supports designed to accommodate replaceable protective tiles, shielding the machine structure from heat and sparks generated during high-power laser cutting.

These inexpensive, consumable tiles absorb cutting-related damage instead of the machine itself, helping reduce maintenance costs, prevent costly repairs, and extend machine service life.

Efficient Fume Extraction

Optimized Airflow. Cleaner Cutting.

The **CENTRA** features an integrated fume extraction system designed to efficiently remove smoke, dust, and airborne particlesg enerated during laser cutting.

Directed airflow draws contaminants away from the cutting area, helping maintain a cleaner working environment while reducing buildup inside the machine.

Pneumatically controlled extraction flaps automatically open based on the cutting bridge position, concentrating suction where it is needed most. This targeted extraction improves fume removal efficiency, reduces unnecessary airflow, and helps maintain consistent cutting conditions.



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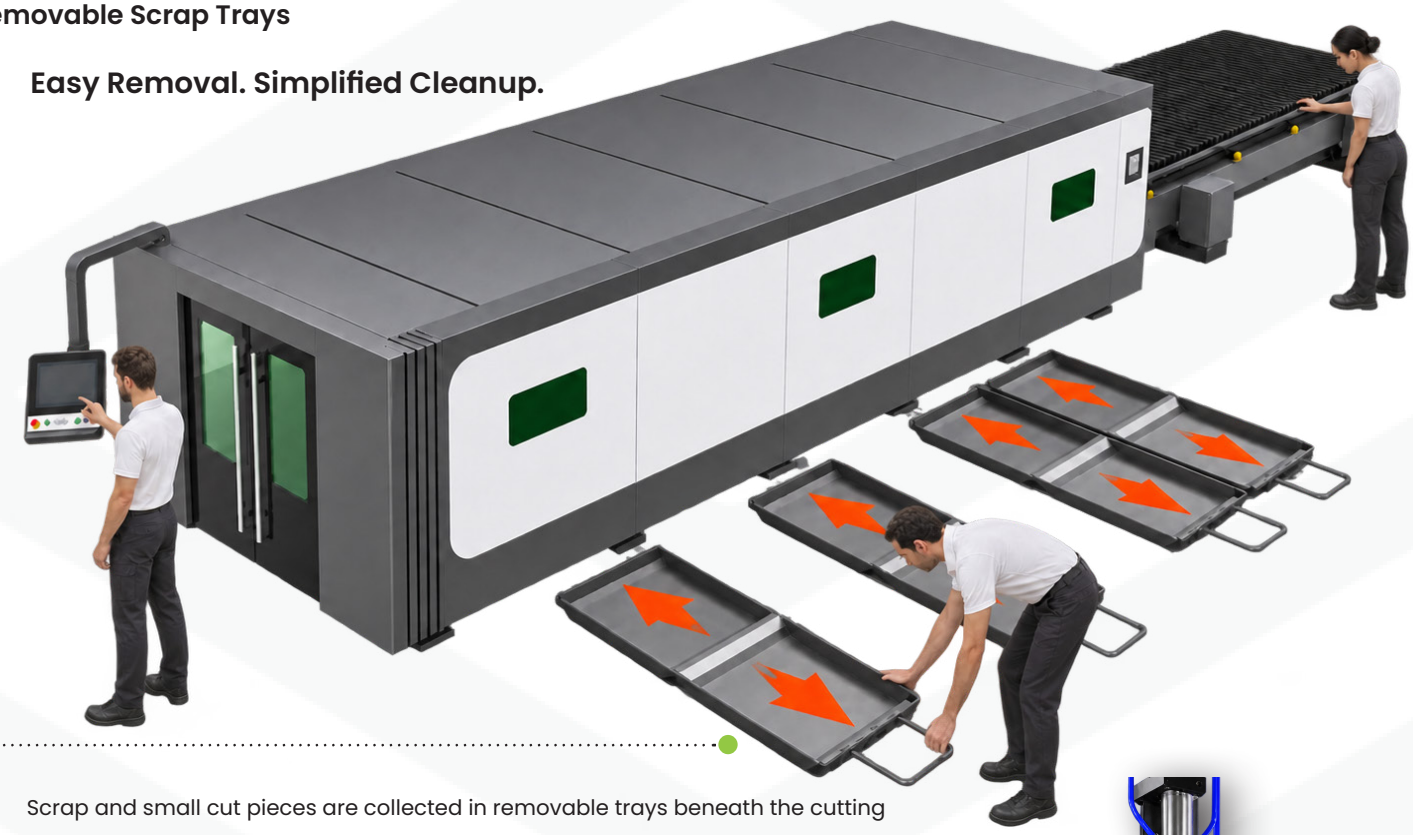
Removable Scrap Trays

Easy Removal. Simplified Cleanup.



Scrap and small cut pieces are collected in removable trays beneath the cutting area. The trays slide out from the side of the machine, providing convenient access for emptying and cleaning while reducing maintenance effort and downtime.

Cutting Head

Intelligent Monitoring. Simplified Maintenance.



Designed for laser powers up to 30 kW, the cutting head features real-time temperature and pressure monitoring for reliable cutting performance.

Optional pierce and cut detection sensors provide additional process control, while the service-friendly design allows optical components to be replaced on-site in approximately five minutes without removing the cutting head or requiring recalibration.

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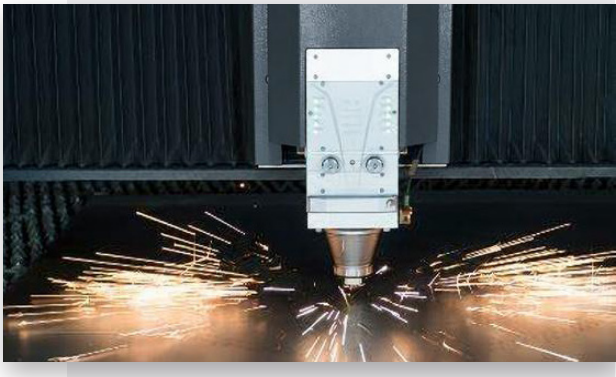
CENTRA Options

Pierce Detection

Less Waiting. More Cutting.

Optional Pierce Detection automatically identifies when the laser has penetrated the material and immediately begins cutting. By eliminating unnecessary piercing delays, this feature improves processing efficiency and productivity, especially when cutting medium to thick materials.



PlusCut

Faster Cutting. Cleaner Edges.

PlusCut is an advanced laser cutting technology optimized for thick carbon steel applications. By combining a positive focal point with optimized cutting parameters, PlusCut delivers cutting speeds up to 20% faster than conventional oxygen-assisted laser cutting while improving edge quality and reducing burr formation.

This technology produces smoother surfaces, smaller holes, and sharper contours while minimizing secondary processing. The result is higher productivity, reduced processing time, and lower overall production costs.

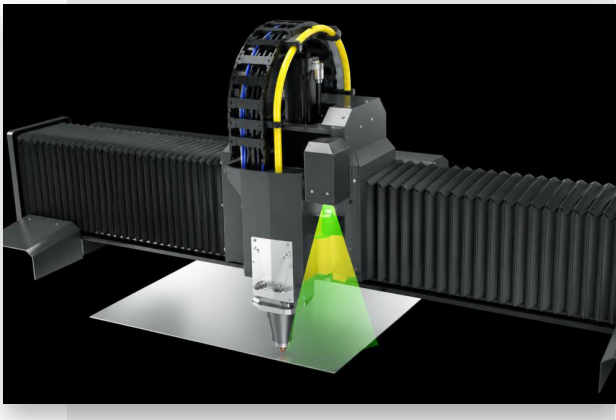


Edge Detection Camera

Faster Setup. More Cutting.

The optional Edge Detection Camera, mounted on the cutting bridge, automatically identifies sheet position and detects material edges within seconds.

By minimizing manual alignment and setup time, the system improves cutting accuracy, reduces operator intervention, and increases overall production efficiency.



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Nozzle Changer

Less Intervention. More Production.

The optional Automatic Nozzle Changer, available in 5- station or 9-station configurations, automatically exchanges cutting nozzles based on programmed requirements, reducing manual intervention and setup time.

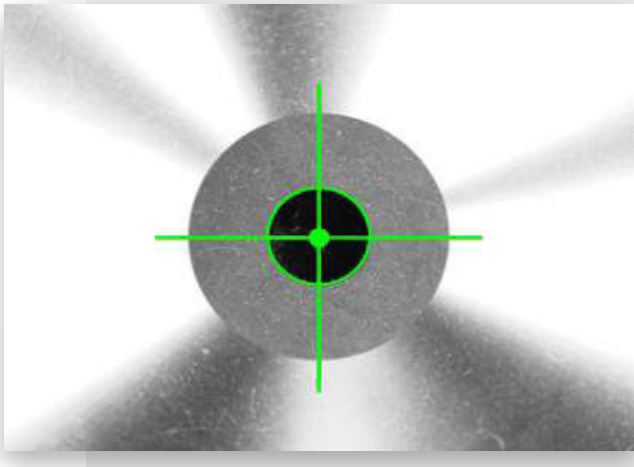


Nozzle Centering

Precise Alignment. Consistent Cutting.

The camera-based Nozzle Centering system enables quick, precise nozzle alignment while providing real-time monitoring of nozzle condition.

Live images displayed on the machine control allow operators to easily verify nozzle positioning, reduce setup time, and maintain consistent cutting quality and performance.



Load / Unload Automation

Automated Material Handling. Increased Productivity.

The automated Load/Unload system streamlines material handling, reduces operator intervention, and improves overall production efficiency.

- Automated loading of raw material and unloading of processed sheets.
- Supports continuous production with minimal operator intervention.
- Integrated support rakes help prevent scratching during unloading.
- Independently controlled vacuum cups and pistons accommodate different sheet sizes.
- Vertical unloading motion minimizes cycle times and simplifies operation.
- Flexible layout configurations to accommodate production requirements.

Available for 3015 and 4020



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CENTRA Options

Load / Unload + Tower

Automated Storage. Continuous Production.

The integrated Tower Automation system combines automated material handling with high-density sheet storage to maximize productivity, optimize floor space, and support extended unattended operation.

- Automated storage, loading, and unloading of sheet material.
- Multiple storage levels accommodate different materials and thicknesses.
- Enables continuous cutting with minimal operator intervention.
- Controlled material handling reduces the risk of scratching and damage.
- Compact, modular design maximizes floor space utilization.
- Expandable configurations to support evolving production requirements.

Available for 3015 and 4020



OPC-UA

Connected Machines. Smarter Manufacturing.

Optional OPC-UA connectivity enables the CENTRA to share machine data with external monitoring and production management systems.

Using a standardized communication protocol, customers can integrate machine information into their existing MES, ERP, or Industry 4.0 platforms for centralized monitoring, production tracking, and improved operational visibility.



Lantek Expert Cut

Simplified Programming. Optimized Nesting.

Lantek Expert Cut CAD/CAM software simplifies offline programming and nesting for the CENTRA. Its intuitive interface allows users to import part geometries, create optimized sheet layouts, define cutting operations, and generate CNC programs.

By improving material utilization and streamlining programming, Lantek helps reduce waste and increase overall productivity.



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"As each of you very well know, any piece of equipment is only as good as the company that stands behind it. Your exceptional service and equipment knowledge provides Samuel with the solutions we need!"

SAMUEL 1855

- Mike Van Dyke / General Manager
Samuel, Son & Co. (USA) Inc.



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