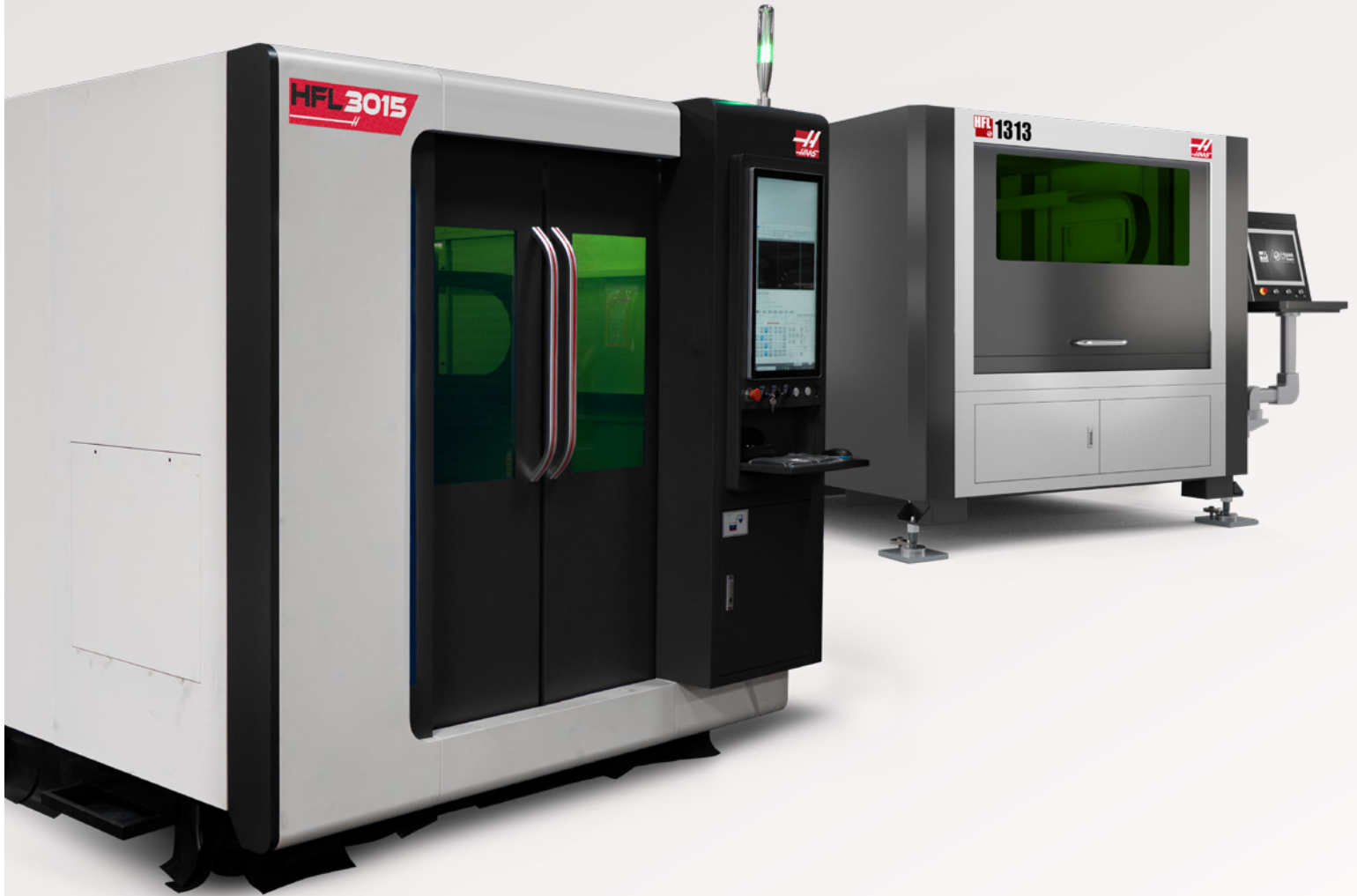




**Haas**  
F1 Team  
OFFICIAL MACHINE TOOL



# FIBER LASERS

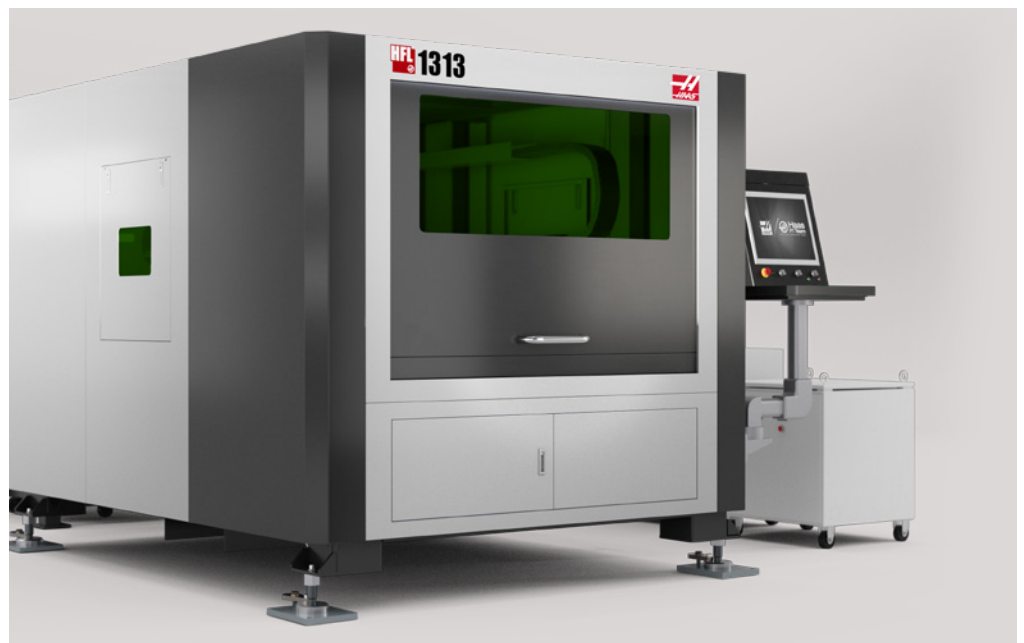
Up to 6 kW Models with Haas Support

# FIBER LASERS WITH HAAS SUPPORT



## Compact Fiber Lasers

The HFL-1313 brings professional fiber laser cutting capability to smaller shops and contract manufacturers. This compact machine delivers precision cutting in a space-saving footprint, with a generous 4.25 x 4.25 ft work area and a fully enclosed design for safety.

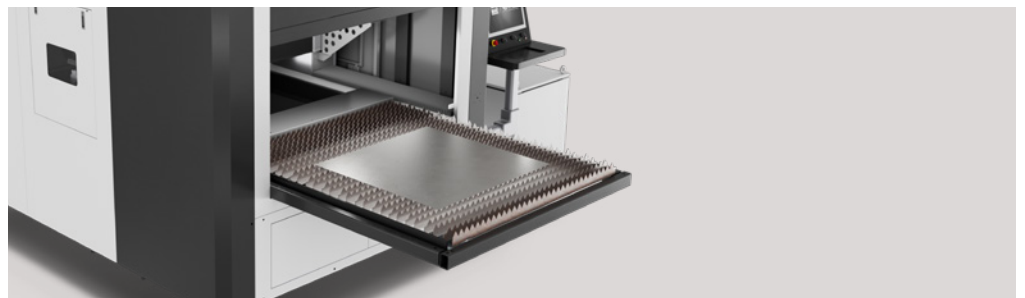


**Cutting Area** 51.2" x 51.2"  
(1300 x 1300 mm)

**Platform Style** Manual  
Pull-Out Pallet

**Max table  
Load** 485 lb  
(220 kg)

**Fiber Laser  
Source** 1.5 or 3 kW





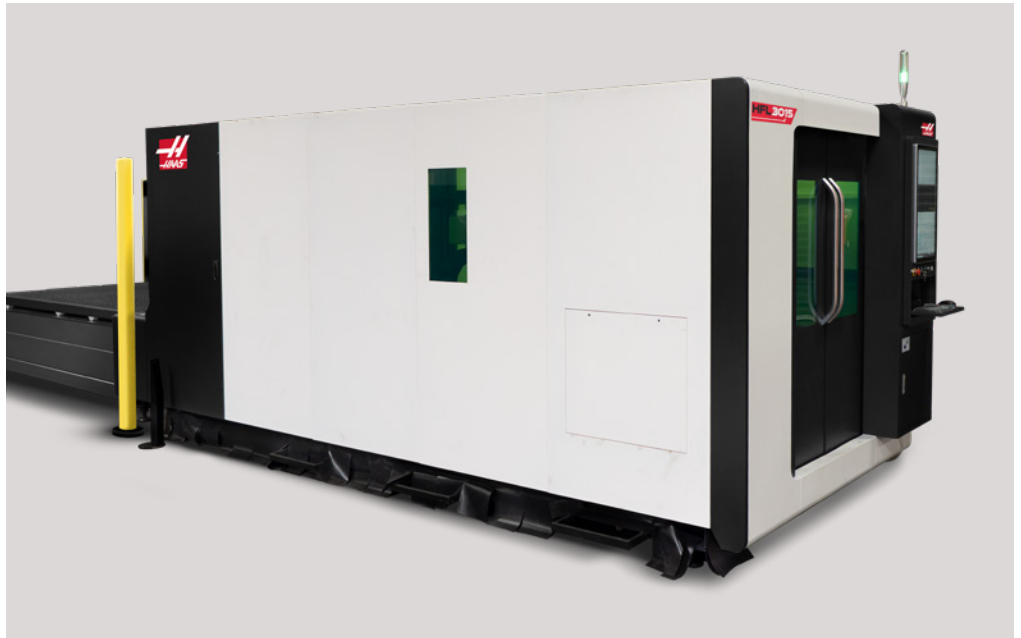
The Haas Fiber lasers are engineered for high-speed, high-precision performance, across varying materials and thicknesses. Each system utilizes low-inertia servomotors and a rigid frame, enabling precise positional control. The auto-focusing laser head continuously monitors the cut, and makes adjustments to ensure optimal quality. Cut with confidence, knowing that your fiber laser comes backed with the outstanding support Haas is known for.

### The Benefits of a Fiber Laser:

- 1. Lower Operating Costs:** Fiber lasers are up to three times more energy efficient than other laser systems.
- 2. Minimal Maintenance:** The solid-state design eliminates complex mirrors, bellows, and optical alignment common with CO<sub>2</sub> systems, translating to less downtime and lower maintenance.
- 3. Higher Beam Quality:** The short wavelength is better absorbed by metals, leading to faster cutting speeds, especially on thin-gauge materials.

### Production Fiber Lasers

The HFL-3015 fiber lasers are ready for partial automation right out of the box. A large bed and a dual-shuttle system allow raw material or finished parts to be loaded and unloaded on one table, while the other table is in the machine and cutting, enabling near continuous operation.



**Cutting Areas** 122.8" x 62.2"  
(3120 x 1580 mm)

**Platform Style** Dual-Shuttle  
Pallets

**Max table Load** 2425 lb  
(1100 kg)

**Fiber Laser Source** 3 or 6 kW



## Carbon Steel

Ga	In	mm	1.5 kW	3 kW	6 kW
20	0.036	0.912			
19	0.0418	1.062			
18	0.049	1.214			
17	0.054	1.367			
16	0.060	1.519			
15	0.067	1.709			
14	0.075	1.897			
13	0.090	2.278			
12	0.105	2.657			
11	0.120	3.038			
10	0.135	3.416			
9	0.150	3.797			
8	0.164	4.176			
7	0.179	4.554			
6	0.194	4.935			
5	0.209	5.314			
4	0.224	5.695			
3	0.239	6.073			
	0.276	7			
	0.315	8			
	0.354	9			
	0.394	10			
	0.433	11			
	0.472	12			
	0.512	13			
	0.551	14			
	0.591	15			
	0.630	16			
	0.669	17			
	0.709	18			
	0.748	19			
	0.787	20			
	0.827	21			
	0.866	22			

## Stainless Steel

Ga	In	mm	1.5 kW	3 kW	6 kW
20	0.038	0.950			
19	0.044	1.100			
18	0.050	1.270			
17	0.056	1.400			
16	0.063	1.590			
15	0.070	1.800			
14	0.078	1.980			
13	0.094	2.40			
12	0.109	2.780			
11	0.125	3.180			
10	0.141	3.570			
9	0.156	3.970			
8	0.172	4.370			
7	0.186	4.760			
	0.197	5			
	0.236	6			
	0.276	7			
	0.315	8			
	0.354	9			
	0.394	10			
	0.433	11			
	0.472	12			
	0.512	13			
	0.551	14			
	0.591	15			
	0.630	16			
	0.669	17			
	0.709	18			

## Aluminum Alloy

Ga	In	mm	1.5 kW	3 kW	6 kW
20	0.032	0.810			
19	0.036	0.910			
18	0.040	1.020			
17	0.045	1.100			
16	0.050	1.290			
15	0.057	1.709			
14	0.064	1.897			
13	0.072	2.278			
12	0.081	2.657			
11	0.091	3.038			
10	0.102	3.416			
9	0.114	3.797			
8	0.129	4.176			
7	0.144	4.554			
6	0.162	4.100			
	0.197	5			
	0.236	6			
	0.276	7			
	0.315	8			
	0.354	9			
	0.394	10			
	0.433	11			
	0.472	12			
	0.512	13			
	0.551	14			

## Support Gasses Overview

The gas used to assist the laser beam is critical, as it directly determines the quality, speed, and maximum thickness of the cut, as well as the overall operating cost. The choice of gas hinges on the material being processed and the desired final edge quality.



**Ideal System Cutting Range**

### Nitrogen

**Nitrogen provides the cleanest cuts.** Cut edges are burr-free and have no oxidation, minimizing post-processing. Nitrogen requires high pressure and high volume, leading to higher operating costs, and may require larger, more sophisticated gas delivery systems.

Requires: 290 psi (20 bar)  
46 cfm (1.3 m<sup>3</sup>/min)

### Shop Air

**Shop air has the lowest operating cost.** Shop air is readily available, and just needs to be filtered and dried. You will need a high-powered industrial air compressor and dryer in order to produce the required operating pressure and volume for laser cutting.

Requires: 230 psi (15.9 bar)  
53 cfm (1.5 m<sup>3</sup>/min)

### Oxygen

**Oxygen is for heavy-duty cutting,** especially on materials like thick carbon steel. It creates an exothermic reaction that significantly boosts the cutting power, while being fairly cost-effective. Cuts made with oxygen are oxidized and will require significant post-processing.

Requires: 145 psi (10 bar)  
46 cfm (1.3 m<sup>3</sup>/min)

# CUTTING SPECS

We have rigorously tested our laser systems across three of the most common materials to provide a dependable performance benchmark. However, it is crucial to understand that industrial lasers are highly sensitive to environmental factors, such as temperature and humidity, and may require fine-tuning upon installation to achieve peak performance.

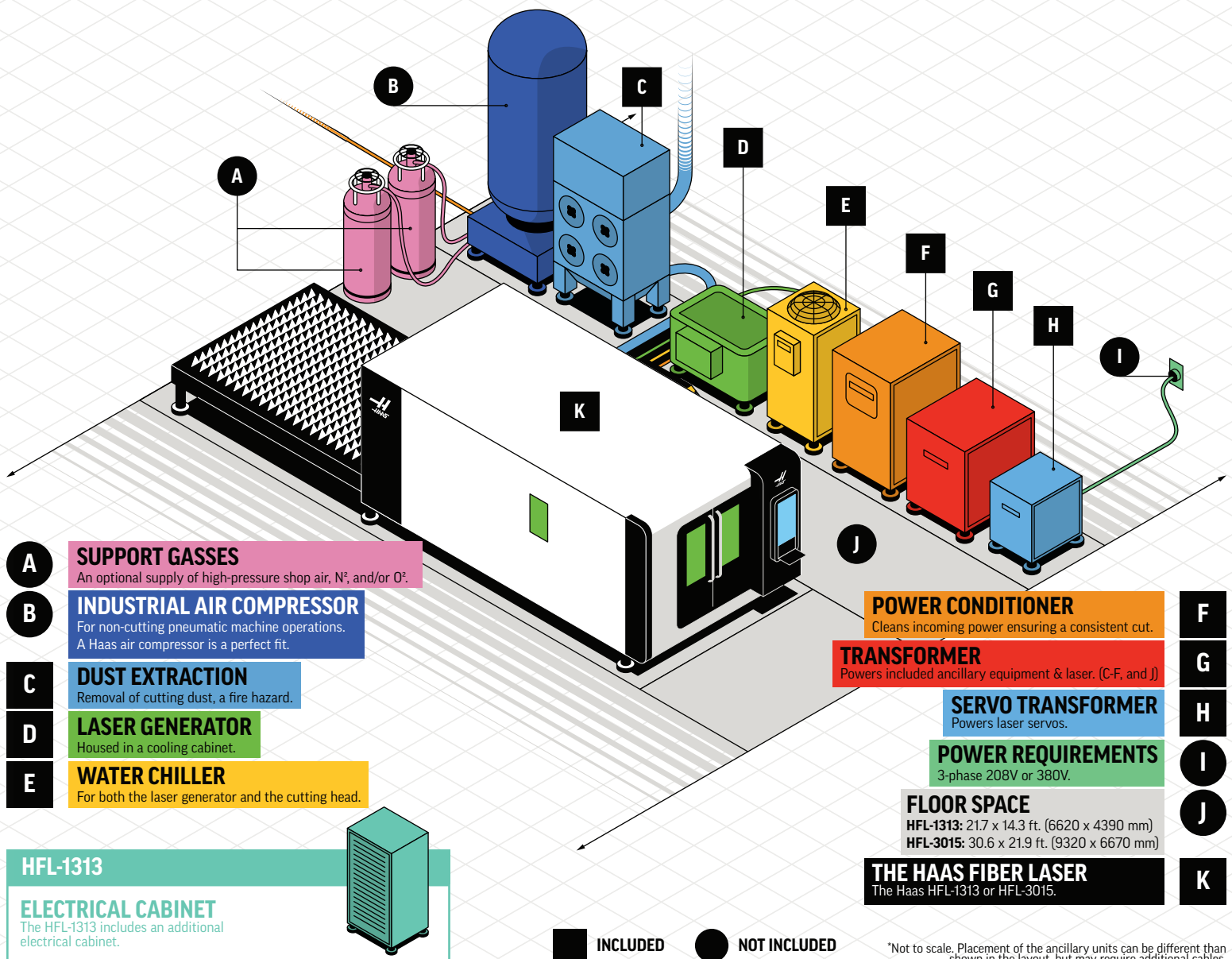
Please use the cutting chart to the left as a primary guide for selecting the optimal laser for your needs. For the best cut quality, efficiency, and longest component lifespan, ensure the majority of your production work falls within the "Ideal System Cutting Range" as indicated.

## Laser Specs

	1313	3015
<b>Travels (X,Y,Z)</b>	51.6 x 51.6 x 3.9 in (1310 x 1310 x 100 mm)	60 x 120 x 8 in (1530 x 3050 x 220 mm)
<b>X/Y Positioning Accuracy</b>	+/- 0.002 in (+/- 0.05 mm)	+/- 0.002 in (+/- 0.05 mm)
<b>X/Y Repeatability</b>	+/- 0.0008 in (+/- 0.02 mm)	+/- 0.0008 in (+/- 0.02 mm)
<b>X/Y Axis Max Speed</b>	3150 ipm (80 m/min)	5118 ipm (130 m/min)
<b>Max Acceleration</b>	1 G	1.2 G

## The Haas Fiber Laser System

Haas Fiber Lasers are complete production cells, and are much larger than a mill or lathe system. The Haas fiber laser relies on several included auxiliary units to function, and will require additional support systems.



**A SUPPORT GASES**  
An optional supply of high-pressure shop air, N<sub>2</sub>, and/or O<sub>2</sub>.

**B INDUSTRIAL AIR COMPRESSOR**  
For non-cutting pneumatic machine operations. A Haas air compressor is a perfect fit.

**C DUST EXTRACTION**  
Removal of cutting dust, a fire hazard.

**D LASER GENERATOR**  
Housed in a cooling cabinet.

**E WATER CHILLER**  
For both the laser generator and the cutting head.

**HFL-1313**  
**ELECTRICAL CABINET**  
The HFL-1313 includes an additional electrical cabinet.

**F POWER CONDITIONER**  
Cleans incoming power ensuring a consistent cut.

**G TRANSFORMER**  
Powers included ancillary equipment & laser. (C-F, and J)

**H SERVO TRANSFORMER**  
Powers laser servos.

**I POWER REQUIREMENTS**  
3-phase 208V or 380V.

**J FLOOR SPACE**  
HFL-1313: 21.7 x 14.3 ft. (6620 x 4390 mm)  
HFL-3015: 30.6 x 21.9 ft. (9320 x 6670 mm)

**K THE HAAS FIBER LASER**  
The Haas HFL-1313 or HFL-3015.

■ INCLUDED    ● NOT INCLUDED

\*Not to scale. Placement of the ancillary units can be different than shown in the layout, but may require additional cables.



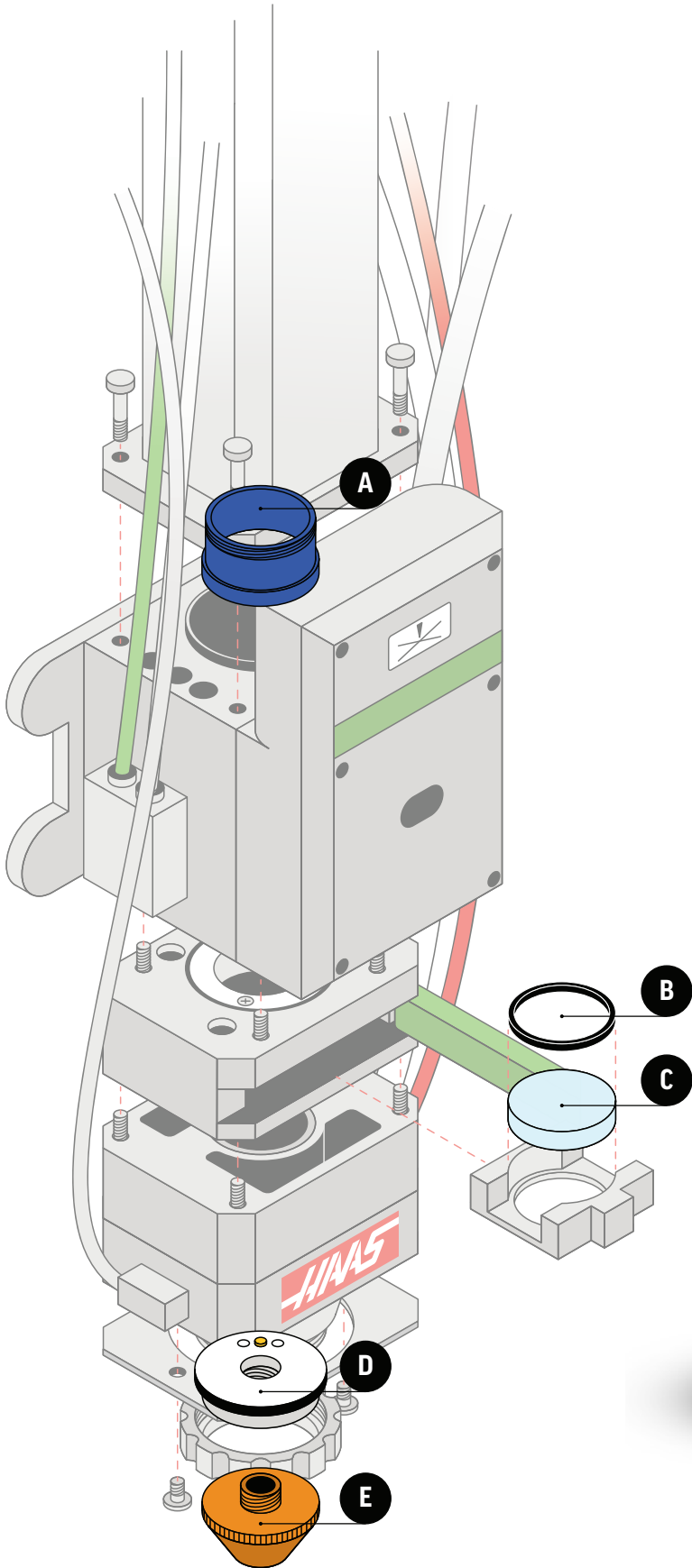
# FIBER LASER UPKEEP

Running your fiber laser demands precision. While a fiber laser requires minimal new tooling, the machine will still experience wear and tear. A select number of critical components must be replaced by the user. You can save time by fabricating elements like bed slats in-house, but other elements, like optics and nozzles, will need to be purchased. Everything you need to keep your Haas fiber laser running at peak efficiency is available from HaasTooling.com, along with all the complementary shop equipment and tooling required to finish the job.

## Laser Consumables

Consumable Name	Service time	Part number(s)
<b>A</b> - Focusing Lenses	1-2pcs/year	09-1021 (3 kW) 09-1190 (6 kW)
<b>B</b> - Seal Ring	45-50 days	09-0996
<b>C</b> - Protection Lens	1-2pcs/week	09-0994, 09-0995 (3 kW) 09-1168, 09-1169 (6 kW)
<b>D</b> - Ceramic Ring	3-4pcs/year	09-1015 (3 kW) 09-1188 (6 kW)
<b>E</b> - Nozzles	3-5pcs/month	09-0997 - 09-1014, (3 kW) 09-0996 - 09-1014, (3 kW)

\*Under a normal use case. Depending on your run times and materials you may need to replace various elements more or less often.



**Low Prices • High Quality • Fast & Free Delivery**

\*Not to scale. Layout is for reference only, refer to official technical documents for fiber laser maintenance and repair.



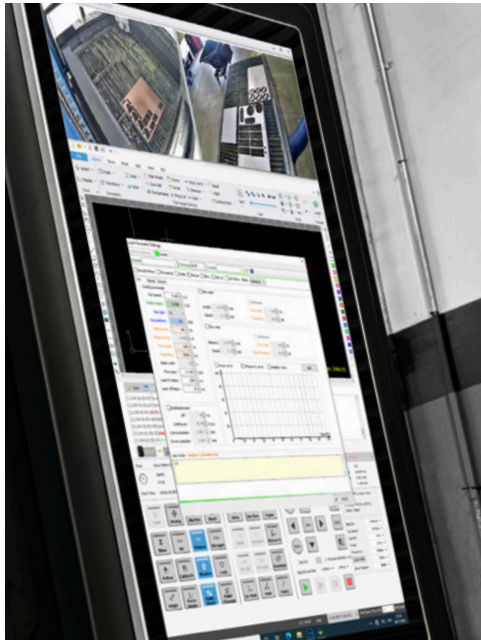
CypCutE



# A POWERFUL ALL-IN-ONE SOFTWARE

CypCutE takes the headache out of modern CNC laser control by combining deep operational power with an exceptionally user-friendly interface. It stands as the premier choice for both rigorous high-volume industrial use and intricate, high-precision custom jobs.

The software is built for integration, supporting direct import of popular vector file types such as DXF, AI, PLT, and Gerber. Operators can quickly and precisely plan their cut sequencing and nesting, set specific parameters for pierce delays, power, and speed for various materials, and begin cutting immediately, maintaining full command over every aspect of the process.



## Total Control

Whether you're cutting aluminum, stainless steel, carbon steel, or something else, your Haas fiber laser comes with the parameter customizations you need.



## Camera Monitoring

Internal and external cameras allow you to monitor the cutting bay and the second pallet, from the control screen, maximizing safe operation.



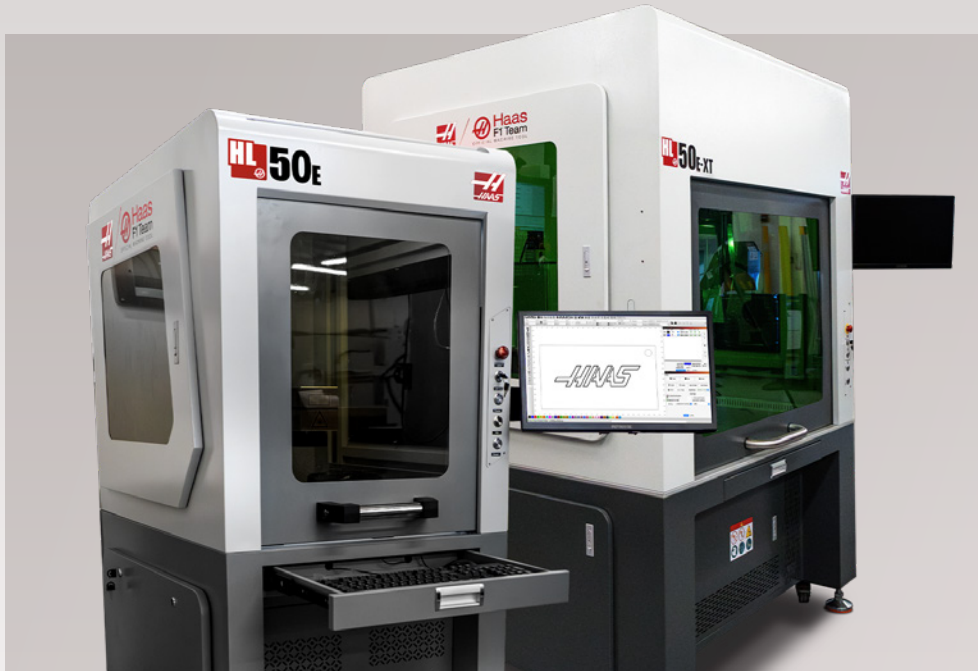
## Nesting

Manually or automatically arrange multiple parts on a sheet to minimize waste. Then utilize manual or photo-based remnant reuse to make the most of leftover material.

# LOCAL SERVICE & SUPPORT



Haas Automation is the largest machine tool builder in the United States, supplying a wide range of quality, high-value products to machine shops and manufacturers around the world, including CNC machines, tooling, workholding, and shop support equipment. Haas products are sold, serviced, and supported through a network of more than 170 locally owned and operated Haas Factory Outlets, in more than 60 countries. Haas Factory Outlets (HFOs) provide the best sales, service, and support in the machine tool industry.



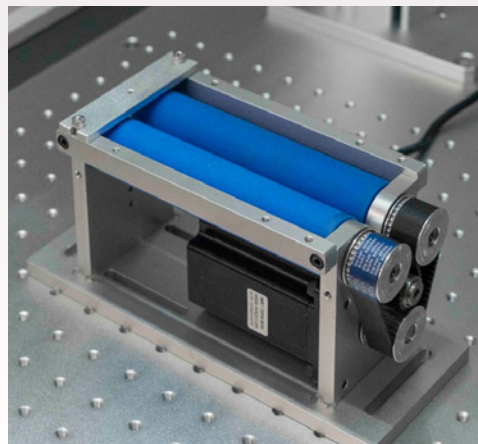
## LASER MARKING

### HL-50E & HL-50E-XT

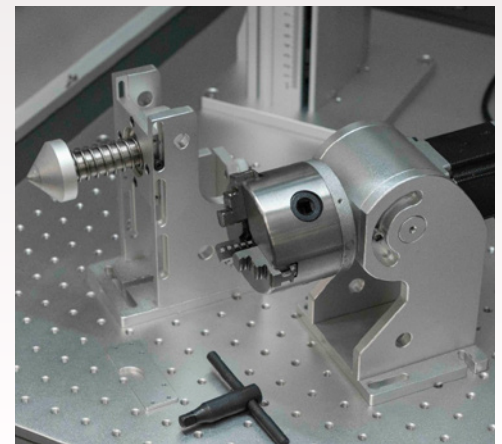
The Haas HL-50E SERIES LASER MARKERS are fully enclosed, infrared fiber laser marking machines that combine advanced photonics and fiber optic technology to offer precise laser marking capabilities to your shop.

### Rotary Fixtures For Laser Markers

These laser rotary fixtures are designed for hassle-free installation on Haas Laser Marking Machines, thanks to the standard 4-pin aviation plug. This connection allows for quick plug-and-play setup, eliminating complex wiring or additional configuration steps. Simply enable the rotary function within LightBurn, connect the plug, and you're ready to start marking!



32mm Ø Rubber Roller, Laser Rotary Fixture 09-0924



80mm 3-Jaw Scroll Chuck, Laser Rotary Fixture 09-0923