Hypertherm®

HyIntensity™ Fiber Laser HFL020

LASER CUTTING MADE EASY

HyIntensity Fiber Laser

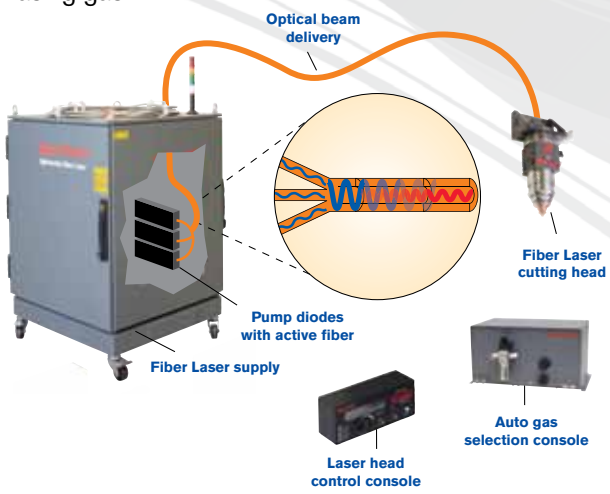
For over 40 years, Hypertherm has focused on providing advanced technology products that cut the cost of cutting metal. Now with the advent of fiber laser technology, dramatically reducing laser complexity and operating cost, Hypertherm brings this focus to fine-feature laser cutting in a way only Hypertherm can …

making laser cutting easy.

Fiber Laser technology: solid state simplicity, efficiency, and reliability

HyIntensity Fiber Laser systems use a low-maintenance solid-state laser source to generate a laser beam that is delivered through a fiber optic cable to the laser head. The glass fiber transfers the beam with a beam quality tailored for cutting metal.

The fiber optic technology enables more flexible table integration without the table size restrictions associated with CO_2 lasers. Three times more energy efficient than CO_2, HyIntensity Fiber Laser systems are a cost-effective solution for fine-featured cutting with no mirrors to maintain and calibrate and no lasing gas.



Multiple solid state pump diodes are combined to generate the laser beam which is then transmitted through a flexible delivery fiber to the laser cutting head.

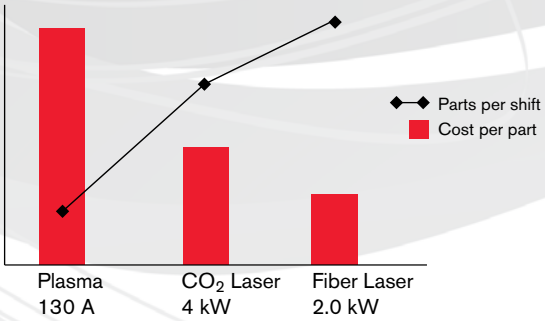
Higher cut speeds, lower operating costs, higher productivity than CO_2 or plasma on material thicknesses below 6 mm.

Thin materials advantages

- Fiber laser enables cutting more reflective material including copper and brass.
- Fiber laser cutting is faster.
- Fiber laser cutting produces a high quality edge.
- Fiber laser cutting provides the lowest cost per part.

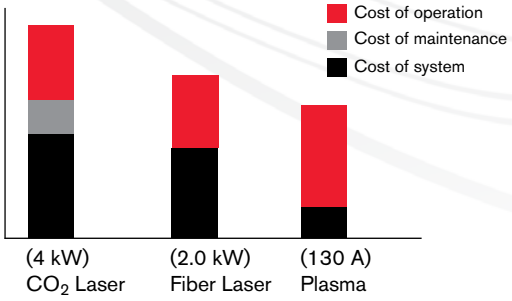
Cost per part and parts per shift

3,5 mm mild steel



Total cost of ownership

5 year outlook



HyIntensity Fiber Laser HFL020: a fully optimized cutting system

HFL020, the industry's first complete fiber laser system specifically optimized for cutting applications, makes it easy to produce consistent laser quality across a full range of materials and thicknesses.

- 2.0 kW fiber laser supply with rated cutting capacity up to 16 mm mild steel (10 mm stainless steel).
- Tightly integrated system design for ease of operation, and reliable, consistent process optimization.
- Pre-set optimized cutting parameters for a full range of materials (mild steel, stainless steel, aluminum) and thicknesses.
- Ability to cut and mark with the same consumables for easy process changeover and efficient operation.
- Fiber laser cutting head (LF150): integrated capacitive height control (patent pending).
- Laser head control console: point of use process and diagnostic information.
- Auto gas selection console: enables consistent cut quality and rapid process change over.
- 2-year warranty.

Applications: expanding customer access to high-precision fine-feature cutting

More easily integrated into a wider range of cutting machine types (compared with CO_2) and significantly more affordable to operate, Hypertherm's HyIntensity Fiber Laser enables more steel fabricators to add high-precision cutting capability to their operations.

- Superior cut quality and tolerances for fine-feature cutting on materials from gauge to plate thicknesses.
- Easily integrated onto a broad variety of high-quality cutting machines.
- Laser cutting technology that can be effectively combined with plasma to deliver the highest productivity and exceed tolerance and quality requirements for most plate applications.

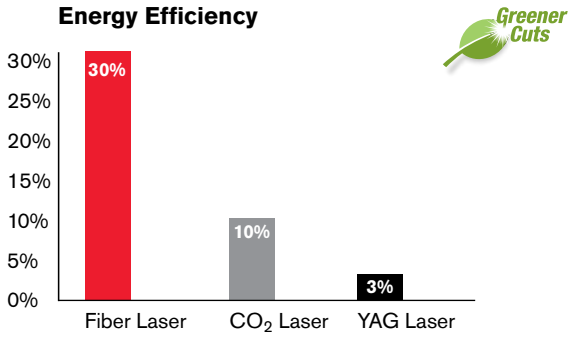
16 mm mild steel

10 mm stainless steel

Specifications

Auto voltage input	VAC 400 – 480	Hz 50/60	Amps 30 A/3-PH
Duty cycle	100% at 40° C		
Safety	IEC#: EN ISO 13849-1 PL:e+ Safety glasses OD 5+ @ 900 – 950 nm, OD 7+ @ 950 – 1200 nm External E-stop switch with (2) NO contacts External door interlock switch with (2) NO contacts		
Dimensions	147 cm H, 82 cm W, 93 cm L		
Weight	226 kg		
Gas supply	Air: 9 bar O_2: 8 bar N_2: 27 bar		
Output power	2000 W nominal		
Emission wavelength	1070 ± 10 nm		
Emission bandwidth	3 nm typical; 6 nm maximum		

- Fiber laser supply (HFL020): 2.0 kW with 3 times greater energy efficiency than CO_2.



- Fiber laser cutting head (LF150): integrated capacitive height control (patent pending).
- Laser head control console: point of use process and diagnostic information.
- Auto gas selection console: enables consistent cut quality.
- New fiber beam delivery, cables and hoses.
- Common control platform using Hypertherm controls, nesting and process optimization software and Hypernet® communication protocol.

- Hypertherm is ISO 9001:2000 certified.
- Hypertherm full-system warranty – complete coverage for two years on all system components and one year on the laser head and beam delivery optics.

Operating data

Virtually dross-free cutting capacity – mild steel 16 mm
Production pierce capacity – mild steel 16 mm
Maximum cutting capacity (edge start) – mild steel 16 mm

Material	Thickness (mm)	Approximate cutting speed (mm/min.)
Mild steel	1	12192
	2	7000
	3	3550
	5	2540
	6	1830
	8	1440
	10	1170
	13	890
	16	590
Stainless steel	1	11430
	2	7000
	3	4200
	5	2000
	6	1140
	10	560
Aluminum	2	6350
	3	3810
	5	1300

Cutting results will vary with material composition, gas purity, and machine motion.

Fiber laser supply is EN ISO 13849-1 Performance Level (PL) E+ standard safety rated.

Fiber laser supply is NEMA 12 rated (sealed to dust for reliable functionality).

Hypertherm®

Cut with confidence®

www.hypertherm.com