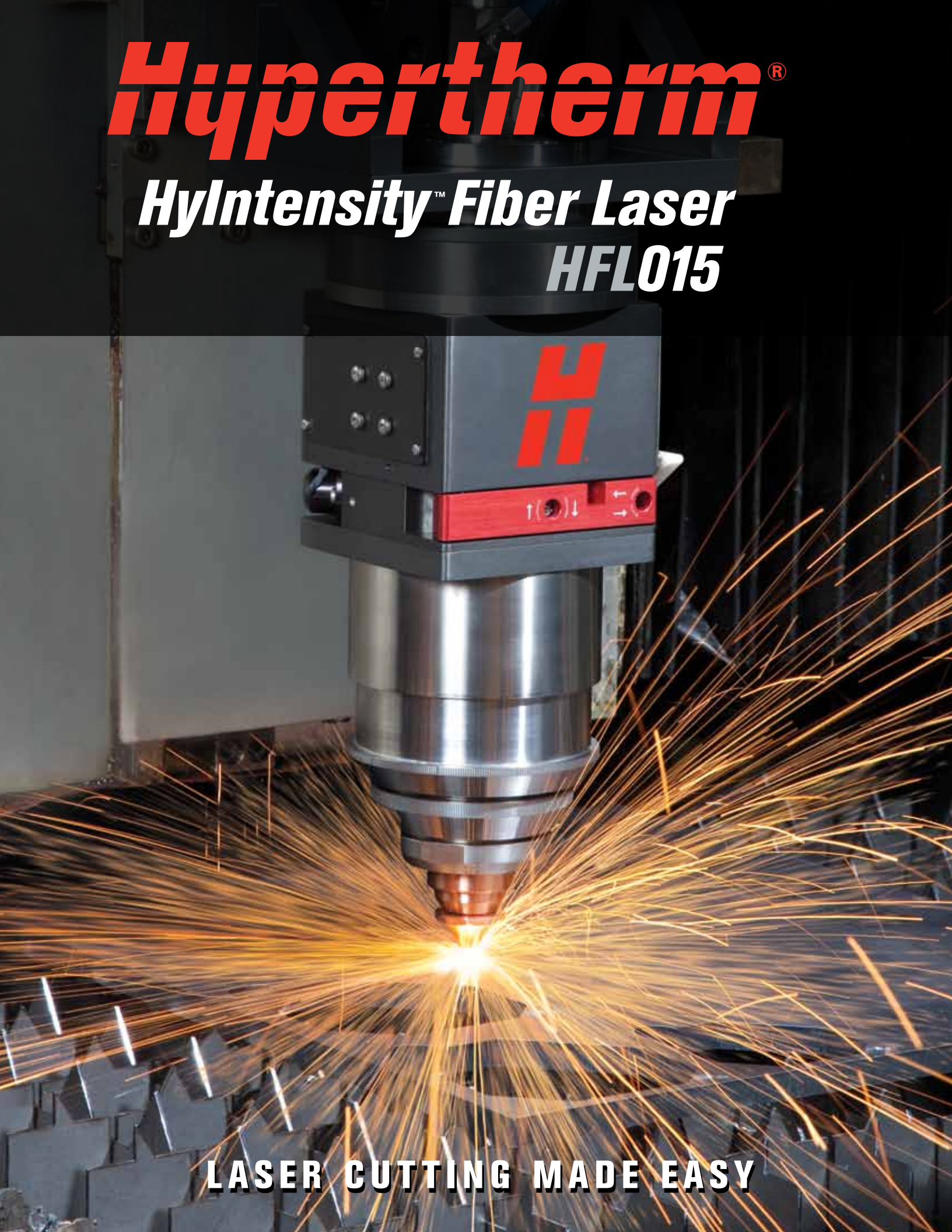
Hypertherm®

HyIntensity™ Fiber Laser

HFL015



LASER CUTTING MADE EASY

HyIntensity Fiber Laser

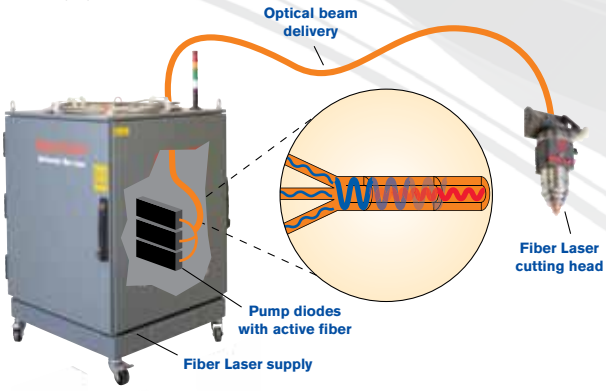
For over 40 years, Hypertherm has focused on providing advanced technology products that cut the cost of cutting metal. Now with the advent of fiber laser technology, dramatically reducing laser complexity and operating cost, Hypertherm brings this focus to fine-feature laser cutting in a way only Hypertherm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

Hypertherm: cutting process experts

Hypertherm's extensive cutting application knowledge and unique organizational capability enables more customers to apply laser for their fine feature cutting with a fully-integrated fiber laser system.

- Over 40 years of high-temperature metal cutting expertise and global leadership.
- Over 75 patented thermal cutting technologies that provide customers with exceptional performance.
- Cutting-process focused research and development to provide customers with industry-leading performance.
- Extensive global OEM base enables Hypertherm to harness the advantages of fiber laser cutting technology and make it broadly accessible to the steel fabricating market.
- Support infrastructure, and cutting technology focused sales and service organization in over 23 countries.
- Hundreds of thousands of Hypertherm thermal cutting systems in use worldwide produce results that customers can rely on.

HyIntensity Fiber Laser HFL015: a fully optimized cutting system

HFL015, 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.

- 1.5 kW fiber laser supply with rated cutting capacity up to 12 mm mild steel (10 mm stainless steel).
- Tightly integrated system design for ease of operation, simple integration and reliable, consistent automatic cutting 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.
- Easy plug and play integration with other Hypertherm products.
- 2-year system 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.
- Higher cut speeds, lower operating costs, higher productivity than CO_2 or plasma on material thicknesses below 1/4" (6 mm).
- 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.

Specifications

Auto voltage input	VAC 400 – 480	Hz 50/60	Amps 30 A/3-PH
Duty cycle	100% at 40° C (104° F)		
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 (58.0") H, 82 cm (32.4") W, 93 cm (36.5") L		
Weight	226 kg (500 lbs)		
Gas supply	Air: 9 bar (130 psi) O_2: 8 bar (115 psi) N_2: 27 bar (400 psi)		
Output power	1500 W nominal; 1600 W maximum		
Emission wavelength	1070 ± 10 nm		
Emission bandwidth	3 nm typical; 6 nm maximum		
Beam parameter product	3 mm*mrad maximum at cutting head		

- 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.

- Fiber laser supply (HFL015): 1.5 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.

Operating data

Virtually dross-free cutting capacity – mild steel 12 mm (½")
Production pierce capacity – mild steel 12 mm (½")
Maximum cutting capacity (edge start) – mild steel 12 mm (½")

Material	Thickness (mm)	Approximate cutting speed (mm/min.)	Thickness (inches)	Approximate cutting speed (ipm)
Mild steel	1	10160	.036	400
	2	5080	.075	200
	3	3175	.135	110
	5	2160	3/16	85
	6	1650	1/4	65
	10	1060	3/8	40
	13	760	1/2	30
Stainless steel	1	10160	.036	400
	2	5080	.075	200
	3	3556	.135	125
	5	1400	3/16	55
	6	915	1/4	36
	10	381	3/8	15
Aluminum	2	3000	.075	120
	3	2250	.120	90
	6	500	1/4	20

Cut speeds vary based on material composition.

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).

Built upon more than 40 years of thermal cutting knowledge, Hypertherm's fully integrated HyIntensity Fiber Laser simplifies the laser cutting process.

Hypertherm®

Cut with confidence™

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