PLUS BEVEL

WORKING AREA UP TO

59.4 X 10 ft

18100 X 3050 mm

POWER UP TO

50 kW

FEATURES

BEVELING UP TO ±45°

TWO LEVEL PALLET EXCHANGE

smd

Laser Cutting Technologies

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PLUS BEVEL

The PLUS BEVEL is designed for specific applications where an angled cut at varying degrees ranging from 1°-45° are required. The primary benefit of this application is to increase the consistency of the bevel angle cut to create a stronger welding point, especially when utilizing robotic welding machines.

Angled cuts are typically indicated by letters in the Latin alphabet correlated to the silhouette of the bevel cut seen in a cross-section view. THE PLUS BEVEL system can easily accommodate the most requested types of angled cuts for these applications, including V (positive and negative), Y (positive and negative) X, and K up to an angle of 45° without affecting the quality or flatness of the cut. The movement of the axis is fluid and consistent, thus ensuring the continuity of the cutting process which is synchronized in real-time by Cutlite Penta's exclusive numerically controlled software.

Structure and Movement

The base is an electro-welded, thermally stabilized steel frame, machined to accommodate the high-precision rails and linear motors. The gantry structure is manufactured with cast aluminum alloy elements to which the steel beam is attached, creating a lightweight yet durable structure. Driven by linear motors with absolute inductive encoders to support motors for the B and C axes, bevel cutting up to ±45° is extremely accurate and consistent, allowing for immediate welding in addition to edge surface cleaning.

Cutting Head

The PLUS Bevel system uses the EVO 3 cutting head, with thousands of installations worldwide, it has been proven reliable when integrated with high-power fiber laser systems. Designed and built in Italy, this autofocusing cutting head offers exceptional cutting speeds on both thinner and thicker materials. The cutting head itself is completely sealed and the focusing lenses can be used with **up to 50KW** of laser power, and a pressure of 25 bar. There are three different focal configurations to choose from: **150-200-250mm**.

SMART Changer *(Option)*

The automatic nozzle change is an option that allows the machine to automatically replace the cutting head nozzle without operator intervention. Up to 10 positions are available, and include both cleaning and calibration functions.

SMART Mix *(Option)*

Smart Gas Mix is a proprietary system, located on the cutting head, which improves the cutting process thanks to hardware technology controlled in real-time by our Smart Manager software. With just a few clicks, the right amount of oxygen and nitrogen can be supplied instantly for cutting varying metal types and thicknesses, saving gas consumption and delivering a cool part for fast removal from the table.

Fiber Laser Source

The highly efficient IPG laser source, proven to provide excellent beam quality and low power consumption, is housed in an air-conditioned and sealed NEMA 12 cabinet for uninterrupted operation even in the harshest of environments. The IPG laser source is solid state and requires little to no maintenance.

Available IPG Laser Source Sizes

6kW	20kW
8kW	30kW
12kW	50kW
15kW	

Available Configurations

PLUS BEVEL MODEL	WORKING AREA FLAT	WORKING AREA BEVEL
3015	10' X 5'	8.4' X 3.4'
4020	13.3' X 6.7'	11.6' X 5.1'
4525	14.9' X 8.4'	13.3' X 6.7'
6020	20' X 6.7'	18.2' X 5.1'
6025	20' X 8.4'	18.2' X 6.7'
6030	20' X 10'	18.2' X 8.4'
6525	21.5' X 8.4'	19.9' X 6.7'
6530	21.5' X 10'	19.9' X 8.4'
7035	23.1' X 11.6'	21.3' X 9.8'
7037	23.1' X 12.3'	21.3' X 10.6'
7530	24.8' X 10'	23.1' X 8.4'
8020	26.4' X 6.7'	24.7 X 5.1'
8025	26.7' X 8.4'	24.7' X 6.7'
9030	29.9' X 10.2'	28' X 8.4'
9037	29.9' X 12.3'	28' X 10.6'
12030	40.5' X 10.1'	37.9' X 8.4'
12037	40.5' X 12.3'	37.9' X 10.6'
13030	43.1' X 10'	42.8' X 8.4'
13037	43.1' X 12.3'	42.8' X 10.6'
15030	49.4' X 10'	47.6' X 8.4'
18030	59.4' X 10'	57.4' X 8.4'

PLUS EVO

WORKING AREA UP TO
59 X 10 ft

POWER UP TO
50 kW

FEATURES

TWO LEVEL LIFT PALLET EXCHANGE
ULTRA HIGH POWER

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PLUS EVO

The **PLUS** range of laser systems stems from the extensive experience that Cutlite Penta has accumulated over the last decade through their ongoing commitment and investment into constant in-house research and development. Every component in our machinery is designed in-house, while 90% of the machine components are manufactured on premises. Every element of this machine is designed and built in Prato, Italy to ensure consistent cutting quality, unparalleled reliability, and a dramatic competitive advantage that will separate you from your competitors.

The quality of movement is ensured by the best linear motors available on the market, which when combined with the IPG laser source and a robust frame design allows you to run a Cutlite Penta laser 24 hours per day seven days per week! Cutlite Penta knows that to withstand the daily demands of industrial production, the value of a laser machine is measured by its reliability, which is the cornerstone of this flagship model. The specific features of the PLUS EVO range ensure unmatched cutting quality up to 50mm or 2 inches, on most materials including mild steel, carbon, and stainless steel. Now with a lighter gantry, the PLUS EVO is a leading brand for both high quality cutting and high acceleration for a rapid cut and a fast return on investment.

Structure and Movement

The base is an electro-welded, thermally stabilized steel frame, machined to accommodate the high precision rails and linear motors. The gantry structure is made with cast aluminum alloy elements to which a steel beam is attached, creating a lightweight yet durable structure. Driven by linear motors with absolute inductive encoders, the PLUS EVO's max acceleration is 3.2 G.

SMART Changer *(Option)*

The automatic nozzle changer is an option that allows the machine to automatically replace the cutting head nozzle without operator intervention. Up to 10 positions are available and includes both cleaning and calibration capabilities.

SMART Mix *(Option)*

Smart Gas Mix is an internally developed component that improves the cutting process thanks to hardware technology controlled in real time by our Smart Manager software. With just a few clicks, the right amount of oxygen and nitrogen can be supplied instantly adapted for cutting varying types of materials and thickness saving gas consumption and delivering a cool part for fast removal from the cutting table.

Cutting Head

The PLUS EVO system uses the EVO 3 cutting head, renowned for its reliability when paired with high power fiber lasers. The in-house designed and built autofocusing cutting head offers exceptional cutting speeds on thin and thick material. The head itself and the focusing lenses can be used with **up to 50KW** of laser power, and a pressure of 25 bar. There are three different focal configurations: **150-200-250mm.**

Fiber Laser Source

The highly efficient IPG laser source, featuring excellent beam quality and low consumption, is housed in an air-conditioned and sealed NEMA 12 cabinet for guaranteed operation even in the harshest of environments. The excellent reliability of the IPG source keeps maintenance costs low.

Available Configurations

PLUS EVO OPTIONS	WORKING AREA	IPG SOURCE OPTIONS
3015	10' X 5'	6kW
4020	13' X 6.7'	8kW
4525	14.9' X 8.4'	12kW
6020	20' X 6.7'	15kW
6025	20' X 8.4'	20kW
6030	20' X 10'	30kW
6525	21.5' X 8.4'	50kW
6530	21.5' X 10'	
7035	23.1' X 11.6'	
7037	23.1' X 12.3'	
7530	24.8' X 10'	
8020	26.4' X 6.7'	
8025	26.7' X 8.4'	
9030	29.9' X 10.2'	
9037	29.9' X 12.3'	
12030	40.5' X 10.1'	
12037	40.5' X 12.3'	
13030	43.1' X 10'	
13037	43.1' X 12.3'	
15030	49.4' X 10'	
18030	59.4' X 10'	

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FAST

WORKING AREA UP TO

19.9 X 6.7 ft

6100 X 2050 mm

POWER UP TO

20 kW

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FAST

Cutlite Penta presents the **FAST**, our revolutionary new lightning fast fiber laser model, designed and tested to achieve **high-speed movements up to 4.2G when cutting material up to 1" without compromising quality**, even on the most complex shapes. The FAST model features a new gantry design to achieve zero jerk acceleration with no vibration and exceptional cutting speeds. This new model closes out the full range of Cutlite Penta machines aimed at achieving fast, highly dynamic movements that outperform all other machines currently on the market.

Every design element of this machine has been engineered and built in Prato, Italy. This ensures the highest level of consistent cutting quality, and unparalleled reliability, offering a dramatic competitive advantage that will separate you from your competitors

Base Structure and Gantry Movement

The FAST model features a fully redesigned gantry to minimize the weight while retaining the rigidity required for a stable and repeatable cutting result. The machine's base is built with l00 mm-thick side frames and a lower center of gravity. The result is an extremely low mass ratio of static parts to moving parts, allowing linear motors (the same reliable and well-tested motors used on the PLUS models) to be placed in a horizontal configuration on the shoulders of the base structure. This optimizes the dynamic performance, and to perform zero radial jerk movements without producing vibrations that can cause movement of the material on the cutting table.

SMART Changer *(Option)*

The automatic nozzle change is an option that allows the machine to automatically change the cutting head nozzle without operator intervention. With up to ten nozzle positions available and both cleaning and calibration functions, this model is ideal for multiple automation options available.

SMART Mix *(Option)*

Smart Gas Mix option contains a component that improves the cutting process thanks to hardware technology controlled in real-time by our Smart Manager software. With a few clicks of the mouse, the right amount of oxygen and nitrogen can be supplied, for varying types of material.

Cutting Head

The FAST system uses the EVO 3 cutting head, famous for its reliability when integrated with high-power fiber laser sources. Completely designed and built in Italy, this autofocusing cutting head offers exceptional cutting speeds on both thinner material and thicker materials. The head itself and the focusing lenses can be utilized with **up to 50KW** of laser power, and a pressure of 25 bar. There are three different focal configurations to choose from **150-200-250mm.**

Fiber Laser Source

Cutlite Penta's extensive experience and research, combined with the use of high-power sources in the FAST model, ensures high acceleration and cutting speeds with unmatched cutting quality is easily achieved on material up to 1" in thickness.

The highly efficient IPG laser source, featuring excellent beam quality and low electric consumption, is housed in an air-conditioned and sealed NEMA 12 cabinet for guaranteed operation even in the harshest of environments. The solid-state reliability of the IPG source virtually eliminates costly maintenance required by competitive laser models.

IPG SOURCE OPTIONS
6kW
8kW
12kW
15kW
20kW
30kW

FAST MODEL	WORKING AREA
3015	10' X 5'
4020	13.3' x 6.7'
6020	19.9' x 6.7'

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FHD FIBER

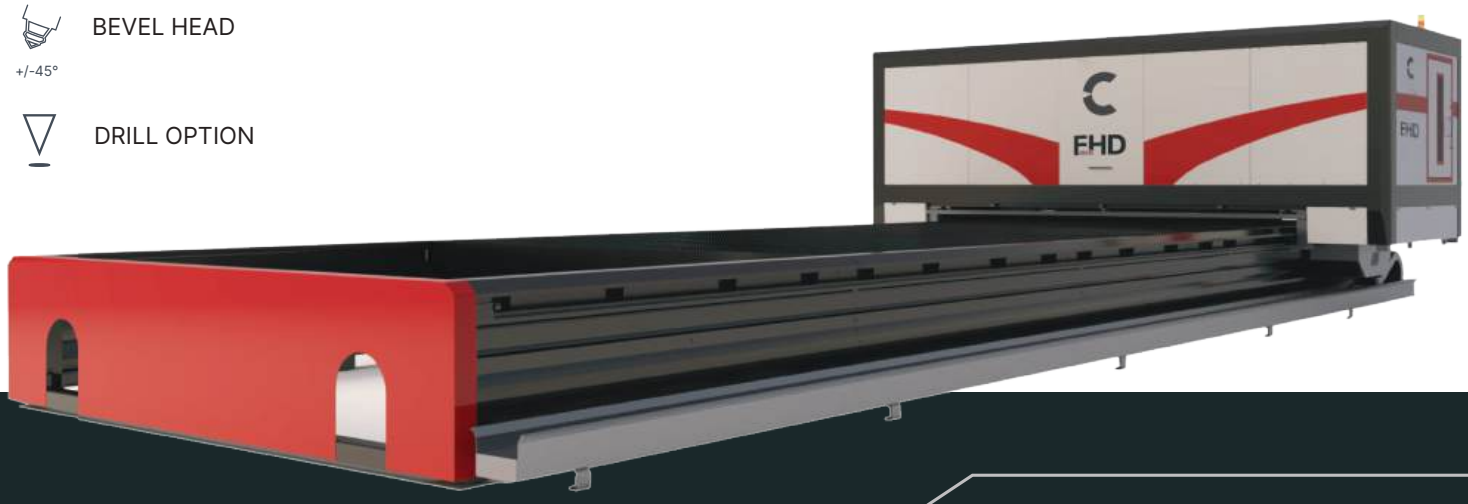
WORKING AREA UP TO
78.8 X 12.3 ft

POWER UP TO
50 kW

ACCESSORIES

BEVEL HEAD
+/-45°

DRILL OPTION



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FIBER HD

The **FIBER HD** combines the practicality and simplicity of large format cutting systems with the power of fiber laser technology up to 50kW. The gantry-style cabinet enclosure brings high-performance fiber laser cutting with a small footprint to industrial sectors previously relying on oxy-fuel, plasma, or CO2 cutting technology.

Fully manufactured and designed in Prato, Italy, the FIBER HD is the new technological benchmark for large-format machines. The combination of over a decade of experience in implementing high-power laser systems, (50kW and below), and a high-quality supply chain is reflected in the choice of the highest quality materials. In-house engineering that is continuing to design and develop new technology is the Cutlite Penta's DNA.

Structure and Movement

The robust steel table structure, extended along the x-axis, ensures fast and trouble-free loading and unloading of large plates with a forklift or existing overhead cranes.

This proven system virtually eliminates any maintenance except for recommended monthly cleaning, which takes a matter of minutes. Utilizing the highest quality rack and pinion motors available, which are located on the outside of the machine frame, ensures any pollution from the cutting process does not affect the operation of the machine.

Cutting Head

The **FIBER HD** model uses the EVO 3 cutting head, which was completely designed and manufactured in Prato, Italy, is equipped with non-contact capacitive sensors and an option for gas-mix capabilities. The head itself and the focusing lenses can be used with **up to 50kW** of laser power, and a pressure of 25 bar. There are three different focal configurations: **150-200-250 mm.**

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SMART Bevel Pro *(Option)*

The unique and well-proven bevel cutting head performs bevel cuts including V, A, X, Y upward, Y downward and K, while still providing the highest quality 2D straight cutting capabilities. The innovative SMART Bevel Pro head is very consistent, even with very long cutting lines. Finished cut parts can be directly transferred to robotic welding stations eliminating additional milling and deburring steps in the production process. It can also rotate ±45° in both cutting directions.

SMART Drill *(Option)*

The optional 6-position tooling turret increases the flexibility of the FIBER HD laser cutting system. The SMART Drill adds mechanical machining options, such as drilling, countersinking, thread-cutting and filing, to the FIBER HD laser system.

Gantry

The electro-welded architecture of the aluminum frame is extremely light, but rigid and strong enough to support the cutting head movement. The enclosed laser cabin moves easily via precise rack and pinion drives to closely follow the cutting process.

Fiber Laser Source

The fiber laser sources (4kW to 50kW) offer exceptional metal cutting versatility. Both IPG and Raycus resonators are housed in an air-conditioned, sealed NEMA 12 cabinet. These efficient lasers provide excellent beam quality, low energy consumption, and reliable performance in demanding production environments.

Available Configurations

FIBER HD MODEL	WORKING AREA	SOURCE OPTIONS
4020	13.3′ X 6.7′	6kW
4025	13.3′ X 8.4′	8kW
6020	20′ X 6.7′	12kW
6025	20′ X 8.4′	15kW
6030	20′ X 10′	20kW
6530	21.5′ X 10′	30kW
6537	21.5′ X 12.3′	50kW
8025	26.4′ X 8.4′	
8030	26.4′ X 10′	
9030	30′ X 10′	
12025	40′ X 8.4′	
12030	40′ X 10′	
13037	43′ X 12.3′	
16025	53′ X 8.4′	
16030	53′ X 10′	
18025	59′ X 8.4′	
18030	59′ X 10′	
18037	59′ X 12.3′	
24025	79′ X 8.4′	
24030	79′ X 10′	
24035	79′ X 12′	

CUTLITE PENTA

XMF

THE ITALIAN EXCELLENCE THAT SETS NEW STANDARDS

XMF

XMF is the compact solution through which Cutlite Penta brings the quality of Italian laser technology within reach of those looking to enter the world of laser cutting with a simple and reliable system, or to complement existing setups.
Equipped with brushless motors, rack and pinion transmission, and a robust frame, XMF integrates the same cutting head and Smart Manager Plus software found on Cutlite Penta's high-end systems, delivering high performance and outstanding reliability.
Engineered for practical, day-to-day operation, XMF reflects Cutlite Penta's technical expertise and results-driven philosophy: a machine that evolves with its users, redefines the boundaries of laser cutting, and sets new standards within its market segment.
Its functional design includes a front access door, rear loading with dual workbenches, and an electrical cabinet separated from the main structure, ensuring greater flexibility and ease of maintenance.

- **EVO 3 cutting head developed in-house;**
- **Fiber laser source up to 20 kW;**
- **Rack and pinion motion system;**
- **100% Made in Italy and CE-compliant.**

LASER POWER
2.000 W
3.000 W
4.000 W
6.000 W
8.000 W
12.000 W
15.000 W
20.000 W

XMF MODEL	WORKING AREA
3015	3000X1500 mm
4020	4000×2000 mm
6020	6000×2000 mm
6025	6000×2500 mm

WORKING AREA UP TO

6000 × 2500 mm

POWER UP TO

20 kW

ENGLISH

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