GLADIATOR
BEAM LASER

The World's Most Compact & Affordable Beam Processing Solution... ***EVER!***

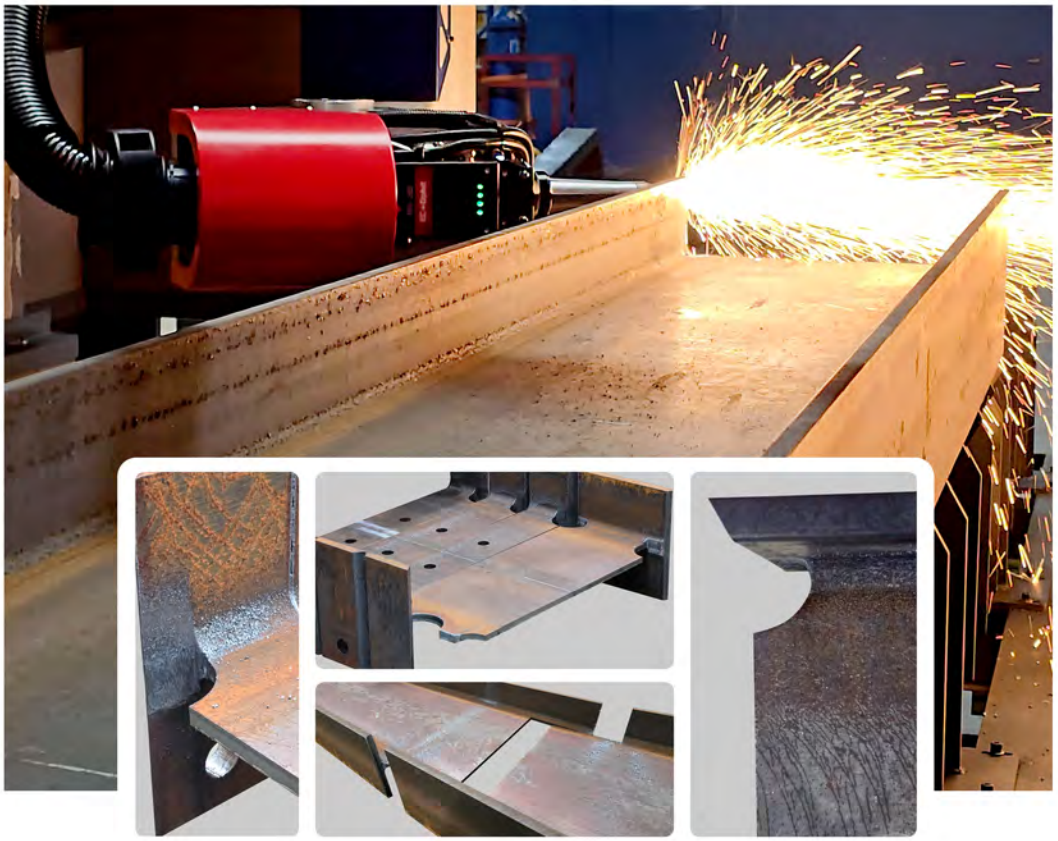
CUTS • DRILLS • COPES • BEVELS • PART MARKS

OCEAN GLADIATOR

JUST LIKE GLADIATORS OF OLD, THIS AMAZING MACHINE IS A WARRIOR THAT DOES IT ALL!

- Cuts to length
- “Drills” holes
- Copes flanges and webs
- Bevels
- Part marks profiles
- Processes structural steel beams, columns, channel and angle.
- Cuts and processes multiple components from a long stock length, using common cut lines.
- Bulk import Tekla NC1 & 3D CAD STEP files (Solid Works, Inventor)
- Equipped with Penta Laser’s 3D five axis cutting system.
- Features a unique space-saving cantilever structure.
- Available in 3 different machine lengths - 40' / 50' / 60'.

COMPACT, AFFORDABLE BEAM PROCESSING SOLUTION



EXCEPTIONALLY SOPHISTICATED LASER PROCESSING

The Ocean GLADIATOR Beam Laser is an amazing machine that does it all. It cuts your beams and columns to length, it “drills” the holes, it copes the flanges and webs, and it etches the part mark into the profile. It performs all these functions in less than ½ the floorspace of any other solution, and costs less than ½ the cost of a drill-saw line and coper!

THE OCEAN GLADIATOR IS THE WORLD’S MOST COMPACT AND AFFORDABLE BEAM PROCESSING SOLUTION... EVER!

The GLADIATOR features a unique space-saving cantilever structure, that travels on precision rails, creating an exceptionally compact and sophisticated laser processing system, designed specifically for processing structural steel beams, columns, channel and angles.

Moreover, the GLADIATOR uses common cutlines, allowing you to cut and process multiple components from a long stock length, with narrow kerf, optimizing the yield on your steel profiles, saving you time and money. And for those producing skids, the ability to cope flush with the inside of the flange, makes it perfect for processing cross-members for welded skids and platforms.

The GLADIATOR is offered in three different machines lengths for processing stock profile lengths up to 40ft, 50ft, or 60ft, with flange heights up to 19.6”, and web widths up to 47.2”. With regard to channel sections, it will handle flange sizes up to 9.8” and webs up to 47.2”.

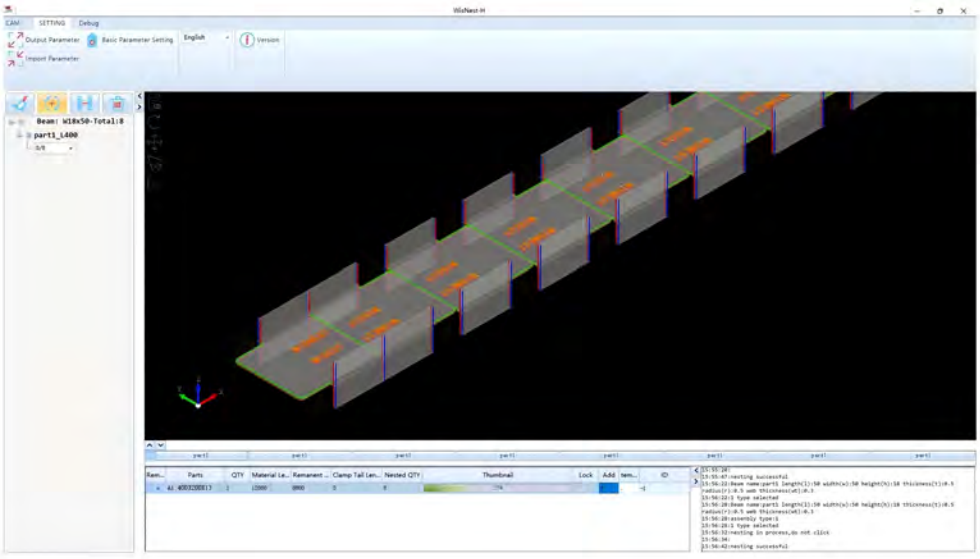
The GLADIATOR is equipped with Penta Laser's world class 3D five-axis cutting system and complies with European CE safety standards, incorporating a fully enclosed cutting area equipped with triple safety interlocks to ensure comprehensive protection for both electro-mechanical and laser operations.

SYSTEM & SOFTWARE

SIMPLE AND EASY TO USE

The Ocean GLADIATOR utilizes Penta Laser's custom software and CNC machine operation system to cut, drill and cope a diverse range of structural steel profiles using a high-power focused laser source. The laser, as well as the software, are both simple and easy to use, making the overall operator experience intuitive to perform.

- The GLADIATOR uses asymmetric acceleration/deceleration to ramp up and slow down smoothly, delivering fast, smooth cutting and significantly extending equipment life.
- Features high-speed, high-precision automatic edge-finding that compensates for mill tolerances and detects edges on special shapes.
- Processes the majority of common hot-rolled steel sections, including wide-flange beams, channels, angles, and other profiles.
- Includes special macros for R-angle grooves, wing plates, flange thinning, web beveling, and additional cutting technologies.
- Offers a comprehensive profile-cutting library with macros designed to maximize cutting efficiency and cut quality.
- Bulk import of Tekla NC1 & 3D CAD STEP files (Solid Works, Inventor, etc.)



FIBER LASER CUTTING HEAD

SUPERIOR CUTTING PERFORMANCE

The professional fiber laser cutting head is fitted with a non-contact capacitance sensor that automatically sets the laser height and automatically tracks the cut. The cutting head floats over the surface to be cut, adjusting to the variance in profile conditions, greatly improving the cutting process.

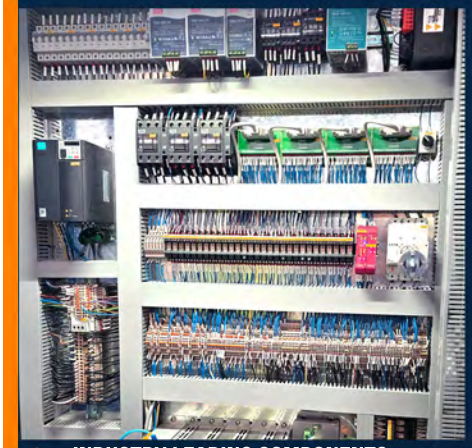
FEATURES:

- High-performance Z-axis float function
- Anti-collision function
- Automatic zoom function

Focal Length of Cutting Head	Cutting Head	Auxiliary Gas Input	Auxiliary Gas Output
240-300mm	Capacitive Height Modulator	Oxygen and Air	Oxygen Proportional Valve

UNIQUE CANTILEVER DESIGN

ROBUST TABLE SLATS



INDUSTRY LEADING COMPONENTS

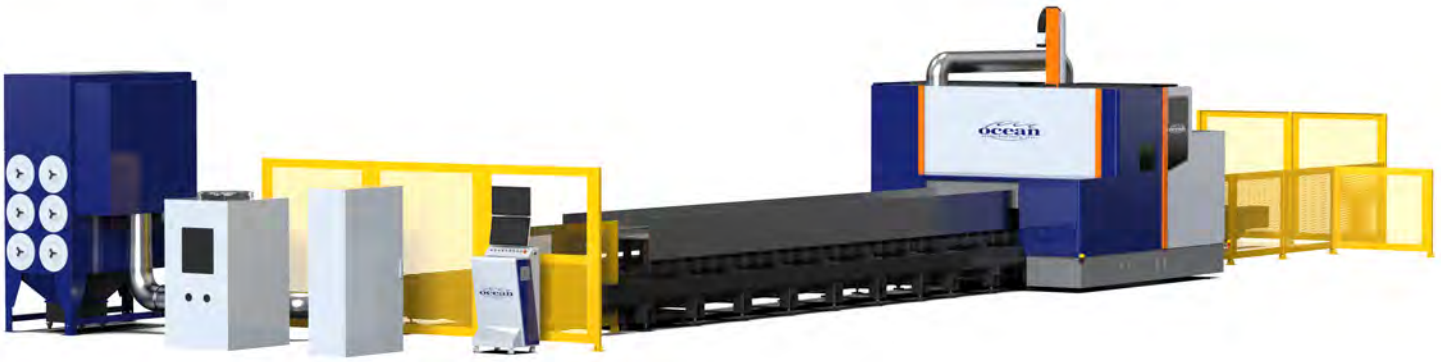
PRECISION CUTS AND PART MARKS

MACHINE BUILD QUALITY

HEAVY-DUTY DESIGN ENSURES RIGIDITY & PRECISION

The Ocean GLADIATOR utilizes a unique cantilever structure, ensuring an incredibly compact overall footprint for a machine that is capable of cutting to length, drilling, coping and part marking. This highly engineered system consists of a base beam, Z-axis, worktable, laser cutting system with bevel cutting function, cooling system, pneumatic system, and other components.

The machine's bed is built from a rugged welded frame and treated through high-temperature and aging processes to remove stress and prevent warping. This ensures long-term stability and the delivery of consistently accurate cuts.



WORKING TABLE:

The worktable uses an advanced toothed plate system that adjusts with one touch to match the beam's width. The far plates stay fixed as a reference point, while the near plates move automatically for perfect support. Made from extra-thick steel with a reinforced rib design, the plates stay stable, resist high-power laser heat, and are easy to replace and maintain.

OCEAN GLADIATOR SPECIFICATIONS

GLADIATOR 4020 / 5020 / 6020			
EFFECTIVE ZONE	**40 ft**	**50 ft**	**60 ft**
Footprint - Long & Narrow	81' x 16'	91' x 16'	101' x 16'
Footprint - Short & Wide	72' x 22'	82' x 22'	92' x 22'
Power	20kW		
X Travel (Max. stock length to process)	40 ft / 50 ft / 60 ft		
Y Travel (Max. beam web size)	47.2"		
Z Travel (total)	3.2 ft		
Z Travel (Max. beam flange height)	19.6"		
Max. Speed of X and Y axis	164 ft/min		
A axis and C axis Rotation Angle	A: ±90° C: ±90°		
Positioning Precision of X and Y axis	±0.0018 in/ft (0.15mm/m)		
Repetitive Positioning Precision of X and Y axis	±0.0012 in/ft (0.1mm/m)		
Max. Cutting Range	web 47" x flange 19.7" web 1190mm x flange 500mm		
Max. Cutting Thickness (20kw)	90° straight cutting ≤ 1.5" (38.1mm) 45° bevel cutting ≤ 1.2" (30.5mm)		