
STEELBURNER
HYPERION

Hyperion the God of light. A Titan in Hellenic mythology.


HYPERION
STEELBURNER



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Fiber Technology

When steelburner's engineers started working on Hyperion, they knew that it was essential for the machine to be equipped with the latest fiber technology!

Fiber laser is the leading technology because:

It is reliable

Able to work trouble free for over 100.000 hours. Even if a malfunction appears, the modular design makes the system possible to work with reduced power until fully repaired.

It is cost effective

With no moving parts, no laser gases, no mirrors and no lamps, the Fiber Laser source needs minimum to none maintenance. The absence of power loss during beam delivery and no need of mirror alignment ever, minimize the working cost.

It is environmental friendly

With over 5 times less energy consumption and wall plug efficiency over 40% compared to CO2 laser technology, the environmental impact is significantly reduced. This impact is further limited by the much lower cooling requirements and the zero-power consumption when the system is idle.

It is much faster

Over 5 times faster cutting speeds in thin sheets compared to CO2 lasers and almost as fast in thick sheets. In thick sheets piercing time with Fiber laser is much faster than with CO2 lasers.

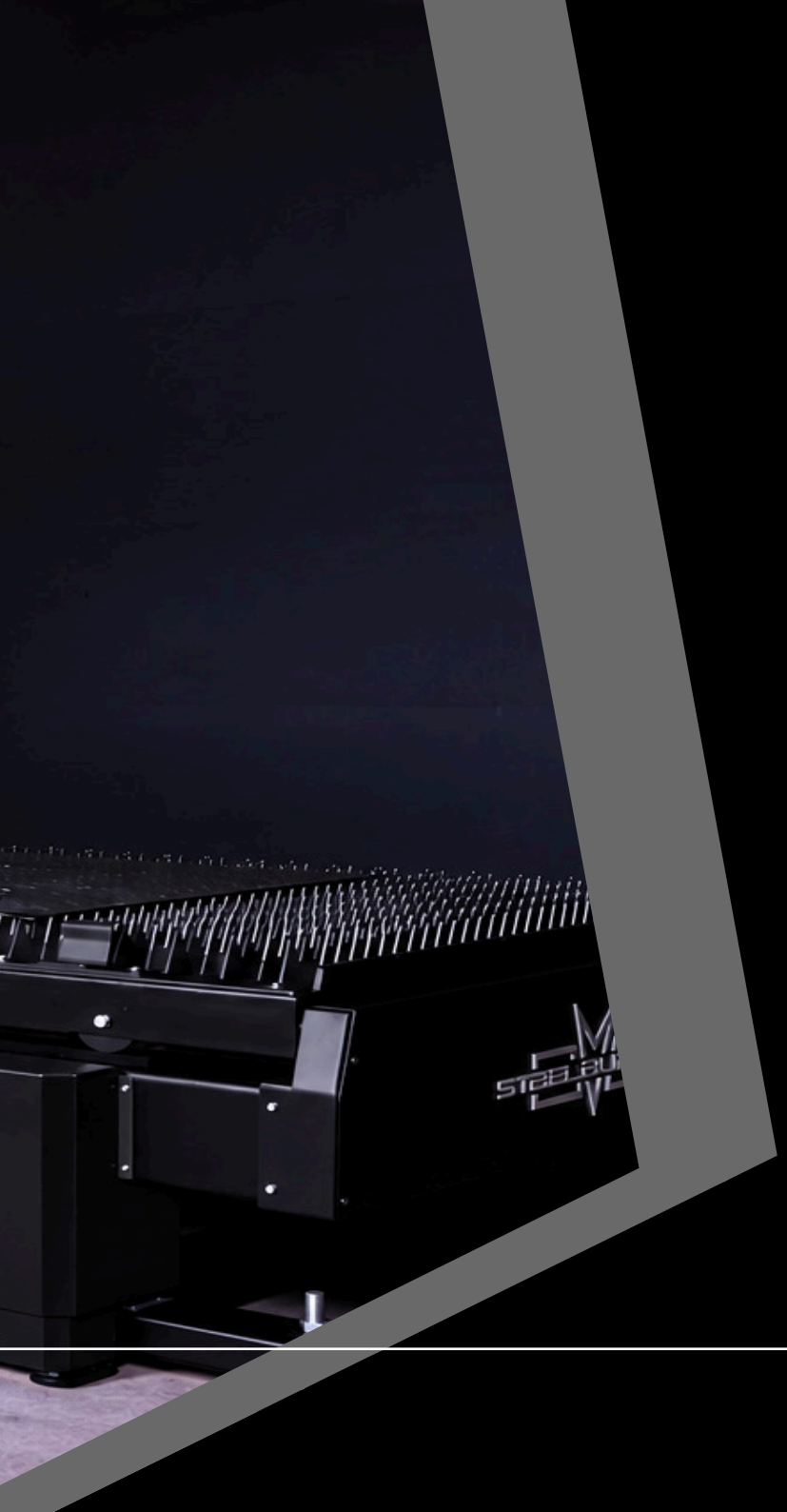
It is more versatile

With Fiber laser technology, all kinds of metal can be cut. Mild steel, Stainless steel, Aluminium, Brass, Copper, Titanium and special steel alloys can be processed.

It is more accurate

The smaller spot size and the higher absorption rate from the materials, make even the most complex and precise contours possible without any problem.


HYPERION
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HYPERION
3015



E SERIES

Hyperion E is the crossroad to performance and economy.

The Laser is Diode Pumped with a doped fiber as gain medium where most of the laser module is made of fiber. No laser gases are used and no mirrors for beam delivery are needed. Instead the laser beam is guided to the material through a fiber optic cable.

For manufacturing of Hyperion E series, the most advanced and worldwide proven components are used. The same components have successfully gained the trust of the world's largest machine tool manufacturers.

Hyperion E is proudly engineered, designed and manufactured in Europe.

Hyperion E series In Numbers

4 kW
maximum laser power

100 m/min
maximum positioning speed

1.5 G
maximum acceleration

20 mm
maximum thickness







Construction & Design



Construction & Design

Construction made smart!

The frame follows the closed cross section principal. It is made of high grade carbon steel, fully welded, annealed to be relieved from internal stresses and then machined in a high precision milling center. By this we have managed to keep the footprint remarkably small and at the same time eliminate any deformation during operation.

To increase performance all moving parts are made of high strength aluminum alloy and the moving bridge is inspired from aircraft structure. Exceptionally stiff, lightweight and fully balanced, able to handle high acceleration and speed without sacrificing accuracy when cutting contours of high complexity.

The base of the machine is also the housing of all vital components. All external equipment like laser source and water chiller, are incorporated into machines housing. The machine is very compact in one unified piece. The small footprint makes Hyperion E suitable to fit in any working area, and the ''plug & play'' design limits installation period as low as one day.



Extra Small Footprint



Rigid construction



Helical Toothed Rack & Pinion Drive

Performance

The best performance to cost ratio
with advanced components and tested technologies !

The exceptional quality helical toothed rack and pinion drive system, combined with high torque servo motors and precise flanged gearheads, ensures speed of 100m/min and acceleration of 1.5G. The wall plug efficiency of the system is very high and thus, remarkably economical during operation.

The focusing head comes from Precitec. Able to adjust the focusing point in milliseconds and measure the distance from the material with 0.01mm precision. It is designed to handle high pressure assist gas and the high focal strokes allow even thick sheets to be processed.

Part of the standard equipment is the automatic three gas selector and the high resolution fully automatic proportional assist gas valve. Based on piezo technology, assist gas's pressure is controlled with 0.1 bar accuracy. The operator can set the type and pressure of assist gas from CNCs database without any manual intervention.

The shuttle table is motorized and controlled from CNC providing smooth vertical movement. In standard equipment the machine comes with dual pallet shuttle table and it is able to swap the tables in just 40 seconds, maximizing overall performance.


100m/min speed


Up to 20mm thickness

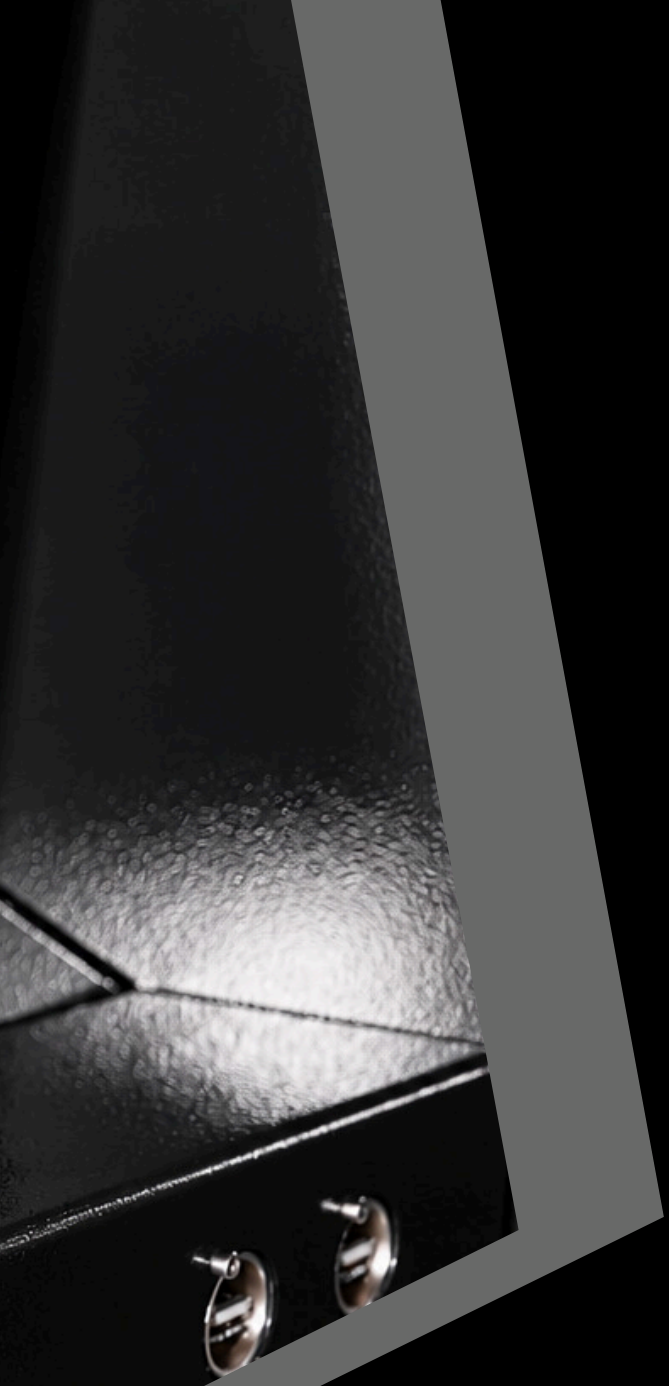

Table swapping time 40s


1.5G Acceleration









Interface & Control

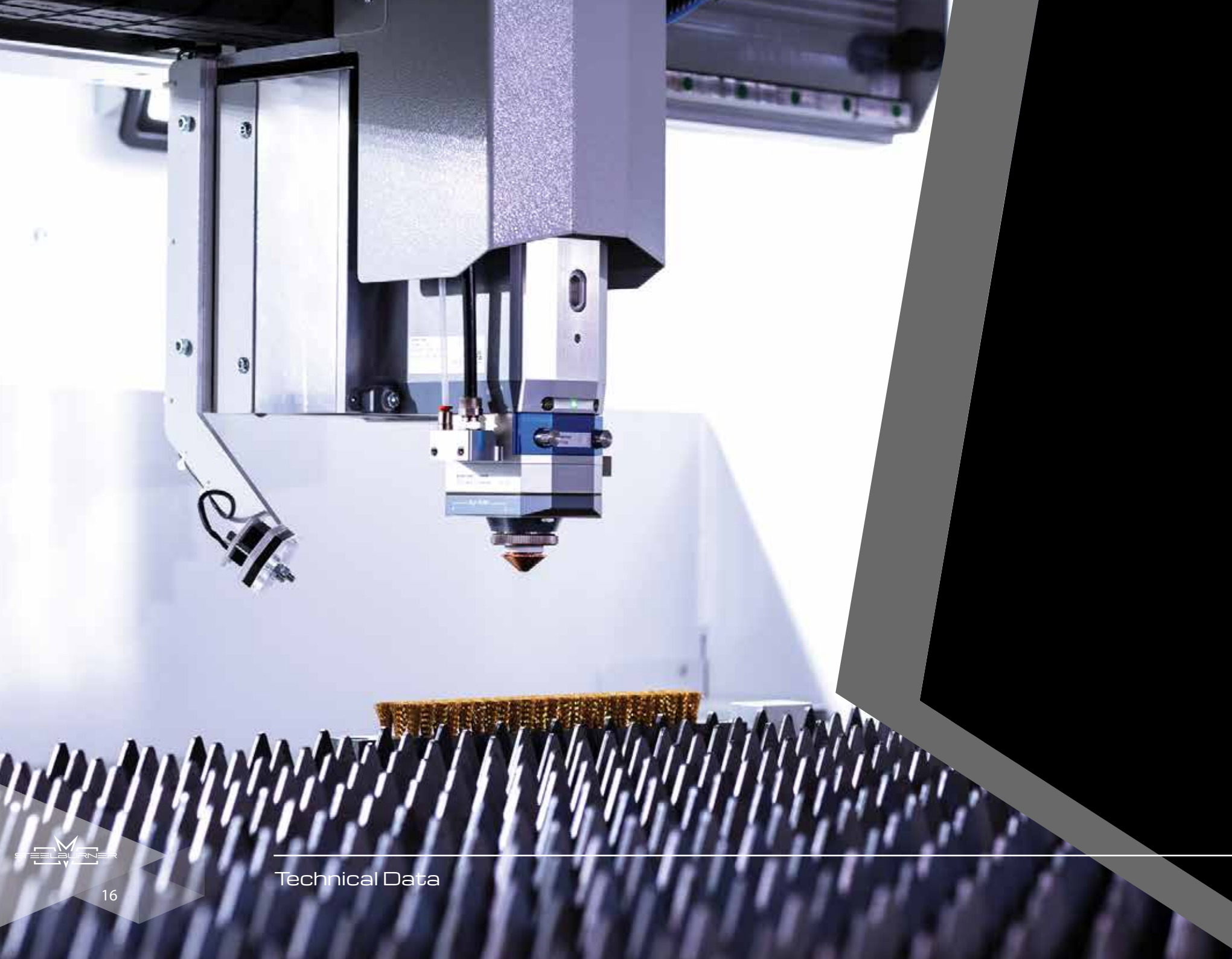
Hyperion E has the operator in center. We have tried hard to make Laser cutting easy!

The “brain” of the machine is a high-end PC based CNC control in Windows operating system environment, using EtherCAT communication protocol, which is the fastest in the market. The operator’s interface is a large 24inches multitouch monitor. From there all machines controls are a few touches away. Wired or wireless connectivity is available with familiar Windows network tools. Many USB ports are available for even more versatile file transferring.

Steelburner’s software engineering team has evolved a laser parameter management software which takes care of all parameters for cutting and piercing process for each material and thickness. The laser power, pulse frequency, assist gas type, gas pressure, focus position, nozzle standoff and other parameters, that lead to the exceptional piercing and cutting quality. After stored, they can be recalled any time by a single touch of a button.

Hyperion E machines are equipped with a direct on head HD camera. The camera is connected to a dedicated 24inces monitor in front of the operator. This makes operation easier and safer.

- Easy to use
- Pre-installed fully customizable material parameter database
- Connectivity and remote support tools
- HD camera for process observation



Technical Data

Hyperion E	Models 3015	4020
Cutting Area	3020x1510x100 mm	4020x2010x100
Overall Dimensions	8050x2220x1980 mm	10200x2720x1980 mm
Weight	8000 kg	11000 kg
Max Speed	100 m/min	100 m/min
Max Acceleration	1.5 G	1.5 G
Positioning accuracy	0.08 mm	0.08 mm
Repeatability	0.03 mm	0.03 mm
Maximum Load	750 kg	1300 kg

Max. Sheet Thicknesses	Watt 1000	2000	3000	4000
Mild Steel	8 mm	12 mm	16 mm	20 mm
Stainless Steel	4 mm	6 mm	10 mm	12 mm
Aluminium	4 mm	6 mm	10 mm	12 mm
Brass	4 mm	6 mm	8 mm	10 mm
Copper	2 mm	3 mm	5 mm	6 mm

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