

## Laser cutting, punching and forming



CombiLaser Multipunch

### The ideal combination: Punching and Fiber Laser cutting

The trend in manufacturing is to make components that are lighter in weight, use less material, conserve resources and integrate functionality. As such, customers are working with thinner sheet structures. Boschert has expanded its successful "Combi" series of machines to include fiber laser.

### Programmable removal of small parts:



Finished parts on the CombiLaser can be quickly unloaded by means of two separate CNC controlled parts chutes. The part chutes are positioned directly in front of the fiber laser head and are 150mm square and 700mm square.

### 1000 watt for quality and separating cuts

The Xfocus 1000 has a full 1000 watts for high performance at a connected load of only 7 kVA. It is possible to make high quality cuts in mild steel from 0.5 – 6mm and stainless steel from 0.5 – 4mm. The Xfocus system is compact and adds little to the machine's footprint. The Xfocus 1000 is suitable for cutting as well as marking. The Boschert CNC has a built-in technology database covering the entire range of materials.

The Xfocus fiber laser system consists of the 1kW laser system, optical fiber, laser cutting head, integrated cooling system, gas supply, off-set control and the technology database. The system is proven to be productive in a wide range of sheet metal parts in prototypes, small, medium and long-run production. The technology-guided cutting process results in burr-free and smooth edges, eliminating secondary operations to clean edges. The fiber laser system is ideal for precision cutting of small contours; thin and delicate parts are produced with exceptional accuracy and repeatability.

#### Integrated technology database

- selection of the optimum cutting parameters from up to nine different cutting speeds depending on material and thickness
- Integrated pierce and corner regime
- Automatic adjustment of the motorized focus system of the laser head and the gas pressures from the database.

### Safety & Security

Boschert has developed a security concept for the fiber laser in cooperation with the BG professional association. Optionally the machine can be also equipped with a sight protection device.



CombiLaser TRI 3-head punching machine with 2xRevotool (head 1 + 3) and rotation / index (head 2)

In close cooperation with our partner, Kjellberg Finsterwalde, Boschert has added the Kjellberg Xfocus 1000 fiber laser to its CNC punching line. The CombiLaser series is available with working ranges from 1000 x 2000mm to 1500 x 3000mm. Now customers can produce complex parts on a single machine without repositioning.



CombiLaser Multipunch with automatic tool changer



Kjellberg XFocus 1000

### Flexibility at its finest.

The Boschert CombiLaser combines the advantages of high quality laser cutting with the unique features of CNC punching. In the past, complex contours could only be cut on a flat sheet laser. Operations such as forming, beading, trimming and threading required a separate CNC punch.

Now Boschert introduces the CombiLaser, combining the best qualities of both operations. Boschert's fiber laser system can be mounted to any of Boschert's standard line of CNC punching machines, which allows the customer to purchase the machine that best matches his requirements.



**BOSCHERT**

## Technical Data

CombiLaser Compact  
CombiLaser Twin  
CombiLaser Tri  
CombiLaser Multipunch

Working area	Y	X
CombiLaser 1000 x 2000	1060 x 2000 mm	
CombiLaser 1250 x 2500	1310 x 2500 mm	
CombiLaser 1500 x 3000	1560 x 3000 mm	

Performance:	
Fiber Laser	Solid state Laser XFocus 1000
Laser performance	1000W
Cutting ranges	Mild steel 0,5 – 6 mm Stainless steel 0,3-4 mm Aluminium 1-3 mm

Speeds	
Max. positioning speed X-axis	60 m/min
Max. positioning speed Y-axis	60 m/min
Simultaneous X & Y	85 m/min

Max. stroke rate punching (HBL)	750 1/mm
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**Tool system**  
Trumpf tooling system

Max. punching diameter	105 mm (76 mm Multipunch)
Revotool 4/6 and 8-way	25 mm/ 20 mm and 16 mm

Number of tool stations (max. with Revotool):

CombiLaser Compact	1 ( 8)
CombiLaser TWIN	2 (16)
CombiLaser TRI	3 (24)
CombiLaser Multipunch	8 (64)

Axis accuracy	
Positioning difference	+ - 0,1 mm
Repeatability	+ - 0,03

<b>Programmable part chute</b> For laser and punch part	600x600 mm max.
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Space requirements and weights	
CombiLaser 1000x2000	7000x5900x2100 mm
Weight	14500 Kg
CombiLaser 1250x2500	8000x6500x2110 mm
Weight	16300 Kg
CombiLaser 1500x3000	9000x7100x2110 mm
Weight	17400 Kg

Electrical values	
Fiber Laser	7 kVA
Punching machine	18 or 25 kVA
Suction unit	5 kVA

## Our system Components:

### Fiber Laser

Solid-state laser XFocus 1000

### LC (Laser-Control)

Automatic adjustment of parameters according to selection at the Boschert control.

### Gas control LGV (Laser-Gas-Supply)

Provision of gases according to parameter selection type and pressure

### LPH (Laser Processing Head)

- Laser cutting head with automatic focus position
- Display of protection glasses dirtiness at LC menu
- Cutting and marking with the same consumables
- Axis with height control unit KHC 4 LAS
- Integrated cooling system



### Dust Collection for fiber laser:

To ensure a safe work environment, it is necessary to have direct extraction of the pollutants in their development area. Full coverage of the dust is possible only at a small distance between the cutting point and extraction point. To that end, Boschert has ensured optimal and effective integration of the extraction system on our CombiLaser. Therefore it is necessary to ensure optimal and efficient integration of extraction system at our CombiLaser.



## Optional components:

### CNC/CAD Software+

CNC / CAD software

Our CNC / CAD solution offers a versatile and powerful support for Boschert punching and laser machines. We also offer Auto- Nesting program for optimal sheet utilization



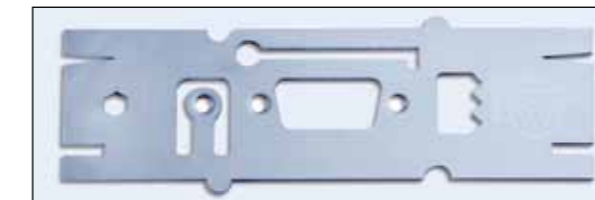
## Boschert loading and unloading system



The loader is located on the left side of the punching machine. The loader replaced the front table and is construct with the extension tables as a complete unit.

The loading system consists of the following components:

- Loading table
- Suction frame with vacuum system
- Thickness measurement
- Trolley for sheet staples



# CombiLaser

Punching  
Forming  
Marking  
Fiber Laser



*simply better!*



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