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Our system Components:

Fiber Laser
Solid-state laser XFocus 1000
Solid-state laser XFocus 2000
Solid-state laser XFocus 4000

LC (Laser-Control)
Streamlined the selection of laser parameters 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
- Displays the laser optic protective glass's cleanliness at the 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 safework environment, it is necessary to have direct extraction of the waste material in their development area. Therefore it is necessary to ensure optimal and efficient integration of extraction system at our CombiLaser. Completely removing dust is only possible only at a small distance between the cutting point and extraction point. To this end, ***BOSCHERT*** has ensured optimal and effective integration of the dust extraction system on our

Spark separator, Temperature control and extinguishing device are standard

Optional components:

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 right side of the punching machine. The loader replaces the front table and is constructed 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

Safety and security

Standard safety device with brushes

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.

Enclosure

CombiLaser TRI with 4 KW and enclosure

Side loading of sheets with enclosure

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CombiLaser

Punching
Forming
Marking
FiberLaser

BOSCHERT
simply better!

Laser cutting, punching and forming

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.

The CombiLaser series is available with working ranges from 1000 x 2000mm, 1250x2500 and 1500 x 3000mm. Now customers can produce complex parts on a single machine.

Flexibility at its finest.

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

CombiLaser Multipunch with automatic tool changer

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.

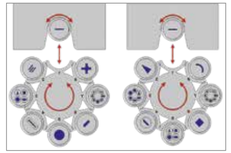
Programmable removal of small parts:

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 670mm square.

Tool Changer

Accessories for Multipunch

Quick change tool cassettes hold the punch, die and stripper



18 tools 23 tools

Possible tool setup for CombiLaser Multipunch

Tools

Trumpf ® standard tooling

punch

adjustment rings

die size 1

Pu stripper

- easy handling
- low cost
- long tool life
- long regrind length

Revotools

4-station up to max. Ø 25mm

6-station up to max. Ø 20mm

8-station up to max. Ø 16mm

Quality and separating cuts 1kW, 2kW, 4kW

In close cooperation with our long term partner, Kjellberg Finsterwalde, we at ***BOSCHERT*** developed a PunchCombi machine with FiberLaser XFocus.
This includes a FiberLaser from IPG and cutting head from Precitec.

Cutting head from Precitec

The ***BOSCHERT*** CNC has a built-in technology database covering the entire range of materials.

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 system
- Automatic adjustment of the motorized focus system of the laser head and the gas pressures from the database.

Kjellberg XFocus 1000

Cooling unit for Laser 2kW/4kW

Kjellberg XFocus 4000

Technical Data

Working area				
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				
Faser Laser		Solid state Laser XFocus		
		1000	2000	4000
Laser performance		1kW	2kW	4kW
Cutting ranges				
Mild steel	max.	10mm	12mm	12mm*
	recommended	0,5-6mm	10mm	12mm*
Stainless steel	max.	5mm	8mm	12mm*
	recommended	0,3-4mm	6mm	8mm
Aluminium	max.	3mm	6mm	10mm
	recommended	1-3mm	4mm	6mm
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		
Max. sheet weight		250 Kg		
Tool systems				
Trumpf tooling system				
Max. punching diameter		105 mm (76 mm Multipunch)		
Revotool 4/6 und 8-way		25 mm/ 20 mm und 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 accuray				
Positioning difference		+ 0,10 mm		
Repeatability		+ 0,03 mm		
Programmable part chute				
For laser and punch part		670 x 670 mm max.		
Space requirements and weights [1]				
CombiLaser 1000x2000		7000 x 5900 x 2110 mm		
Weight		14500kg		
CombiLaser 1250x2500		8000 x 6500 x 2110 mm		
Weight		16300 kg		
CombiLaser 1500x3000		9000 x 7100 x 2110 mm		
Weight		17400 kg		
Electrical values				
Faser Laser		7 kVA oder 14 kVA (4kW)		
Punching machine		18 oder 25 KVA		
Suction unit		5 kVA		
Cooling unit for 2kW/4kW		6,5 kVA		

[1] The exact values can be found in each specific layout plan

* The maximum clamp opening is 12,7 mm. Therefore is for 4 kW Laser the clamp opening the maximum not the cutting range.

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