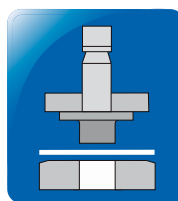




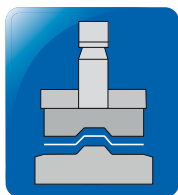
**MP 4020**



**MPL 4020**



**PUNCHING**



**FORMING**



**FIBERLASER**



## MPL 4020



MPL 4020 Pneumatic lifting balls for easy loading

### The ideal combination: Punching and FiberLaser cutting

Because the trend in terms of material savings, resource conservation, lightweight construction and functional integration tends towards thin sheet metal constructions, **BOSCHERT** has now expanded its portfolio for equipping the **BOSCHERT** CombiLaser with a highly modern fiber laser cutting device.

Another benefit of the **BOSCHERT** CombiLaser: All currently existing Boschert punching machine models can be combined with the fiber laser system. **BOSCHERT** can therefore fully adapt to customer needs.

### Programmable chute of parts with max. 400x2000mm



### Touch screen



### Laser workspace (with open safety door)



Touch screen to input the BLS (**BOSCHERT** Laser System) parameters of the laser





## Technical Data MPL 4020

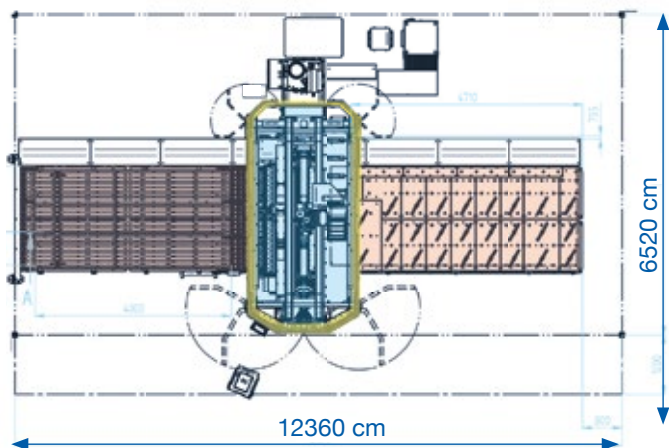
<b>Working area</b>					
<b>MPL 4020</b>		4000 x 2000 mm			
<b>Faser Laser</b>		Festkörper Laser			
Laser performance		1000 1 kW	2000 2kW	3000 3kW	4000 4kW
<b>Schneidbereich</b>					
Mild steel	max.	10mm	10mm	10mm	10mm*
Stainless steel	max.	5mm	8mm	10mm	10mm*
Aluminium	max.	3mm	6mm	8mm	10mm
<b>Speeds</b>					
Max. positioning speed					
Simultaneous X & Y		100 m/min			
<b>Space requirement and weights <sup>1</sup></b>					
<b>MPL 4020</b>		12360 x 6520 x 2260 mm			
Weight		27400 Kg			
<b>Electrical values</b>					
Faser Laser		7 kVA oder 14 kVA (4kW)			
Suction unit		5 kVA			
Cooling unit for 2 kVA / 4kW		10 kVA			

<sup>1</sup> The exact values can be found in each specific layout plan.

<sup>1</sup> The exact values can be found in each specific layout plan.



## Layout plan



## Our system Components



View in working area



Spark separator, Temperature control and extinguishing device are standard



Cutting head from Precitec



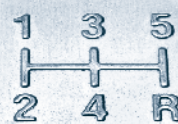
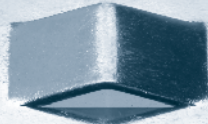
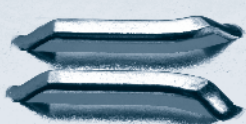
Cooling unit for laser



Cleverly integrated IPG-Fiberlaser source 1, 2, 3 or 4 kW power



Conveyor for slugs



## Rotation Index

360 degree stepless Rotation of all tools (incl. Revotool) up to a diameter of maximum 105 mm with 2 servo motors and pneumatic indexing.

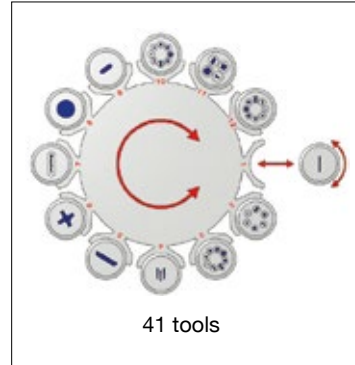


12 Tool stations with cassettes for automatic tool change with easy exchangeable cassettes for punch, stripper and die.

## Tool change



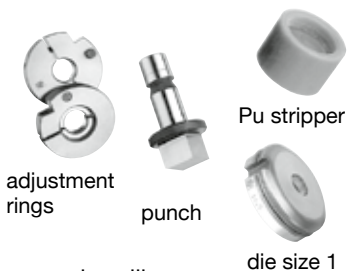
## Tool change



Tool change time on the MultiPunch 4020 is 3-5 seconds for individual tools and less than 3 seconds for RevoTools.

## Trumpf® Standard Tools

All Trumpf standard tools up to size 3 can be used and also all **BOSCHERT** Revo-tools. Therefore the Multipunch could handle up to maximum 96 tools.



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

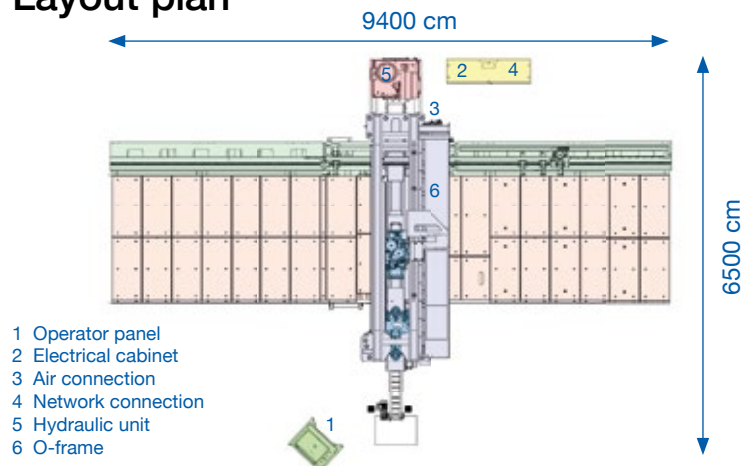


## Technical Data MP 4020

<b>Working area</b>	
<b>MP 4020</b>	4000 x 2000 mm
<b>Performance</b>	
Max. sheet thickness	6,4 mm, Revotool 4 mm
Max. sheet lengths	9999 mm by repositioning
Max. hydraulic punching power	280 kN
Max. workpiece weight	400 Kg
<b>Speeds</b>	
Max. positioning speed	
X-axis	60 m/min
Max. positioning speed	
Y-axis	60 m/min
Simultaneous X & Y	85 m/min
Max. strokes HDE hydraulic	800 strokes/min
<b>Tooling</b>	
Trumpf® tooling system	
Max. punching diameter	105 mm or any shape within 105 mm
Revotool	4/6/8 stations, shapes fitting within 25/20/16 mm
Time of tool changing	1-5 sec.
<b>Axes accuracy during punching process</b>	
Positioning difference	+ - 0,10 mm
Repeatability	+ - 0,03 mm
<b>Space requirement and weights<sup>1</sup></b>	
<b>MP 4020</b>	9.400 x 6.500 x 2.600 mm
Weight	18000 Kg
<b>Electrical values</b>	
Electrical connection value	25 kVA
Hydraulic motor	15 kW
<b>Electrical consumption 2 mm sheet thickness</b>	
Continuous operation	7,7 kW/h
<b>Electrical consumption 4 mm sheet thickness</b>	
Continuous operation	8,75 kW/h
Continuous operation	3 x 35 A
Pneumatic connection value	min. 4 bar

<sup>1</sup> The exact values can be found in each specific layout plan.

## Layout plan







## Multipunch 4020 tool changer

### Special features

- Sheet size up to super format 2000 x 4000 m
- Tools up to Trumpf size 3 (Ø 105mm)
- Flexible forming from above and below (active die)
- Stable „O“ frame
- 12-way auto tool changer
- Punching machine part chute up to 400 x 2000 mm
- Sorting system for small parts up to 150 x 150 mm
- Expandable options / thread cutting / stud welding ...
- Repositioning for sheets up to 9999 mm length
- Fiber Laser cutting system up to 4KW can be combined
- Automatic clamp positioning



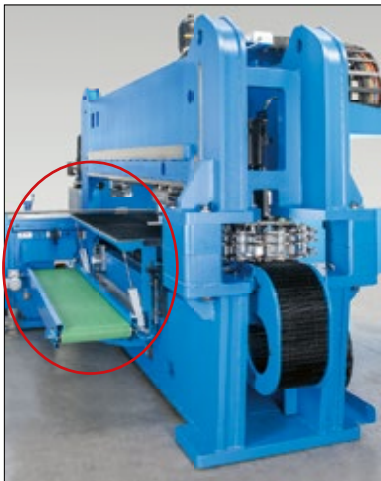
The new CNC punching machine **BOSCHERT** MultiPunch 4020 completes the proven MultiPunch series and is specially designed for the processing of sheets in the so-called super format of 2,000 x 4,000 millimeters.

With its universal punching head, the MP 4020 enables the user a flexibility and double-sided forming of sheet metal up to a sheet thickness of 6 mm. Up to 28 tons of punching force are available for this.

The newly developed O-frame gives it the necessary stability. The **BOSCHERT** MultiPunch 4020 is equipped with a quick twelve-station tool changer that reduces idle times.

The machine can be expanded in many ways. For example, the **BOSCHERT** MultiPunch 4020 can be equipped with a thread cutting unit or with a fiber laser with a maximum output of 4 kilowatts. This gives the user numerous other options for sheet metal processing.

### O-Frame/Part chute



Solid welded steel construction guarantees the highest stability for punching sheets up to 12,7 mm thickness.

Part chute on the left up to part size 400 x 2000 mm. A conveyor belt move the parts to the operator side

### Axis guiding x-axis



Movable disposal for small parts with sorting function for 5 stacking trays..

### Electrical cabinet

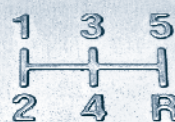
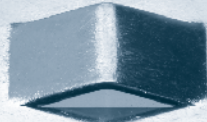
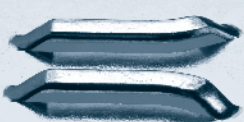


Open and easily surveyed panel includes digital control, cooling fan, transformers and control.

### Industrial CPU



Control with internal memory, USB port and LAN RJ 45 for network connection. Possible online remote support



## Option:

Unloading table with conveyor



MPL 4020 with Unloading table and conveyor



## BG-Soft

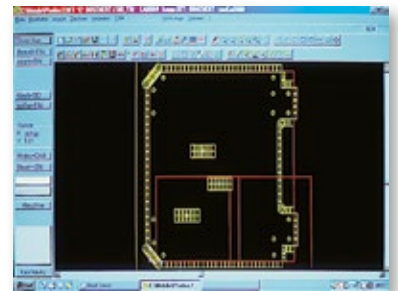
The powerful package for punching and cutting.

## BG-Cut

**BG-Cut** produce depending on automatic or manual selection the processing contours with the required tools. After the machine program for the punching or laser machine has been created, a setup and processing report can be created.

### BG-Cut:

- Direct import of BG-Bend
- 2D Import and drawings
- Machine selection punch or laser
- Automatische sowie manuelle Werkzeug- oder Laserauswahl
- Special tools
- Manual nesting
- Automatic nesting (option Auto Nest)
- 2D simulation
- Online capability
- Setup reports



### BG-Cut Auto Nest: (Option)

Offers optimal material utilization with AutoNest - CNC automatic nesting module.

AutoNest is a powerful true Shape nesting tool offering versatile methods for automatic and manual nesting to achieve the best possible nesting solutions.

### BG-Soft enhanced your productivity with:

- Faster design-to-production times with automated features
- Offline programming means minimal machine down-time
- Collision-less bend sequences mean reduced stock wastage
- Tool libraries are compatible to available tooling resulting in production-ready Setup reports
- Technology report



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