

MULTIPUNCH

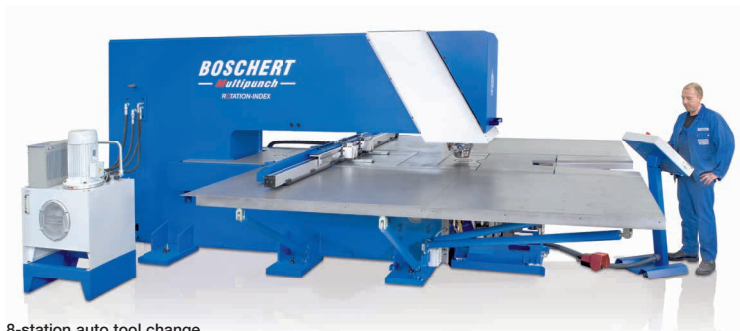
Punching
Nibbling
Forming
Marking
Tapping



simply better!



Multipunch Auto Tool Change



8-station auto tool change

The Multipunch tool carousel is mounted at the front of the machine, below table level. The vertical and horizontal axis movements are controlled by ball screws with linear ball guides using double carriages. The rotary axis positions the eight cassettes with a rack and pinion drive.

The Multipunch uses Trumpf® style tools to size II (3") and **BOSCHERT** Revotools.

It is possible to have up to 64 individual tools, all fully indexable, in the machine.

Frame



Solid welded steel construction guarantees the highest stability for punching sheets up to 12.7 mm thickness.

Robust construction



Wide spaced ball screw and linear guides guarantee positioning accuracy and repeatability.

Small parts removal



The programmable small parts chute measures 200mm x 300mm. The movement of the chute is controlled by a pneumatic cylinder.

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 remote maintenance by internet.



Rotation Index

360 degree stepless rotation of all tools, including Revotools. Maximum diameter of tools is 76.2 mm (3"). Driven by two brushless DC servo motors. The Revotools are changed by a pneumatic cylinder.



8 station tool carousel with cassettes that hold punch, die and stripper or Revotool head with 4, 6 or 8 tools.

Tool Changer



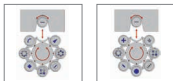
The Multipunch changes tools in 3-5 seconds. Revotools within the same cartridge are changed in less than 3 second.

Tooling



Quick change tool cassettes hold the punch, die and stripper and are set off-line so as not to limit machine run time.

Tooling sample

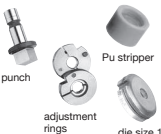


23 tools

18 tools

Trumpf® standard tooling

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



Revotools



Technical Data

Working area

Multipunch 1000 x 2000 mm	1060 x 2080 mm
Multipunch 1250 x 2500 mm	1310 x 2580 mm
Multipunch 1500 x 3000 mm	1560 x 3080 mm

Performance

Max. sheet thickness	Choose Material Clamps for either 7 mm (1/4") or 12.7 mm (1/2")
Max. sheet length	Revotool: 4 mm (5/32")
Max. hydraulic punching power	9999 mm by repositioning
Max. workpiece weight	280 kN
	200 kg

Speeds

Max. positioning speed	
X- axes	60 m/min
Max. positioning speed	
Y- axes	60 m/min
simultaneous X & Y	85 m/min
Max. strokes fast hydraulic	400 strokes/min
Max. strokes fast HBL hydraulic	800 strokes/min

Tooling

Trumpf® tooling system	
Max. punching diameter	within 76 mm or any shape
	within 76 mm
Revotool	4 / 6 / 8 stations, Shapes fitting
	within 25 / 20 / 16 mm diameter
Time of tool changing	1-5 sec.

Axes accuracy during punching process

Positioning difference	+ - 0,10 mm
Repeatability	+ - 0,03 mm

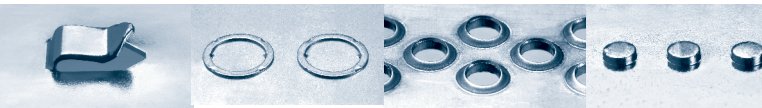
Space requirement and weights¹

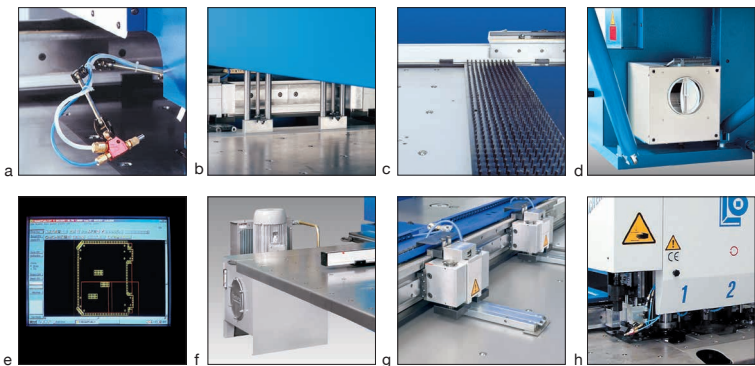
Multipunch 1000 x 2000 weight	6100 x 5338 x 2100 mm
	12500 kg
Multipunch 1250 x 2500 weight	7000 x 5963 x 2100 mm
	14000 kg
Multipunch 1500 x 3000 weight	8060 x 6588 x 2100 mm
	15800 kg

Electrical Values

Electrical connecting value	fast hydr. 25 kVA
Hydraulic motor	11 kW
Electrical consumption 2 mm sheet thickness continuous operation	7,7 kW/h
Electrical consumption 4 mm sheet thickness continuous operation	8,75 kW/h
Required fuse	3 x 35 A
Pneumatic connecting value	min. 4 bar
Hydraulic oil	160 litre

¹ The exact values can be found in each specific installation plan





More components of the Multipunch

- a The automatic tool lubrication serves to increase tool life when nibbling stainless steel (VA) and decreases edge burrs in aluminium
- b Repositioning up to 10 meters and clamp movement without contacting the sheet. 2 robust clamps for sheets up to 200 kg (expandable to 4 clamps). Standard capacity up to 7 mm or 12,7 mm when required (Standard)
- c Sandblasted, corrosion resistant surface as standard. Balls in the table for heavier sheets and easy handling, brushes in the table for thin or scratch sensitive sheets are also available
- d Vacuum slug removal
- e BG-CUT CNC/CAD software to import DXF-files into machine language, calculates punch time, graphic simulation
- f Nibbling up to 800 strokes / min with integrated oil cooling
- g Programmable repositioning of the clamps for faster set up of the machine (Standard)
- h Tapping and drilling attachment for threads M3 up to M12 and smaller drilled holes in thicker sheets
- i Marking apparatus for marking parts in 10 different fonts
- j Stud welding
- k Composite material milling

Boschert loading and unloading system



The loader replaced 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



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