

A close-up photograph of a TRUMPF TruPunch laser cutting machine. The image shows the machine's head assembly, which is dark grey and metallic, positioned above a worktable. The worktable is a large, flat, metallic surface with several rectangular cutouts. In the foreground, several cylindrical metal components, likely punch bits or nozzles, are visible, arranged in a row. The lighting is bright and even, highlighting the precision and industrial nature of the equipment.

TruPunch:

A new standard  
in punching  
efficiency.

# Uniquely efficient.

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TruPunch machines from TRUMPF offer you the flexibility to process a diverse range of parts. The many and varied applications stretch from simple to complex sheet metal parts with serial forming and excellent surface and edge quality. This means you can process a multitude of different parts entirely on one machine – and that fully automated if desired.

TruPunch machines are extremely economical and efficient. They provide particular savings in their use of energy and material resources. The broad choice of high-quality punching tools made by TRUMPF enable flexibility when processing to the highest standards

## TruPunch: Benefits at a glance.

- 1 Resource-efficient processing.
- 2 Punching, forming and deburring (on one machine).
- 3 Full tool flexibility.
- 4 Quality to suit every requirement.
- 5 Custom automation.





### TruPunch 1000

**Economical entry-level machine.** This versatile machine offers an ideal start to punching. It is particularly easy to operate, offers good value for money, and takes up little space.



### TruPunch 2000

**Powerful basic machine.** The compact TruPunch 2000 paves the way for the automated punching world of TRUMPF. Being highly productive and flexible, the machine manufactures a wide range of parts – and that at a very attractive price.



### TruPunch 3000

**Resource-efficient universal machine.** Thanks to skeleton-free processing, the TruPunch 3000 has material savings of 10% on average. Its clever automation makes it extremely user-friendly.



### TruPunch 5000

**Productive high-end machine.** The TruPunch 5000 is the market leader in productivity, process reliability and flexibility. Individual automation solutions guarantee diverse applications and enable optimal throughput, especially in multishift operation.

## Why TruPunch is impressive.

Profitably machining standard contours and formed sections.



Punch in three dimensions. The punching head is suitable for holes as well as for three-dimensional contours such as fishplates or threads. You can process your parts entirely on one machine, with no need for downstream work steps.

- Flexible and cost-efficient thanks to 360° tool rotation.
- Versatile forming.
- High-speed processing.
- First-class punch contours.
- Fast changeover times.

Both stable and accessible.

The design principle of all TruPunch machines is an open C frame. This means the machines and workpieces are accessible from three sides. There is plenty of room for loading and unloading – whether by hand or automatically. The machine's high level of stability also ensures accuracy.



- Good access to the machine from three sides.
- High accuracy.
- Fast unloading of parts.
- Modular automation.

# Punching tools and accessories.

## Wide selection of high-quality punching tools.

For over 40 years, TRUMPF has been providing its customers with top-quality punching tools and much more besides. No matter what challenges you face, we can offer you a range of support – from technical consulting to design assistance, right on to the prompt delivery of your tools.

- **Punching tools:** Within our leading tool system, Classic, we offer a wide range of shapes and coatings as well as free punch shears. With EasyUse in the standard equipment offer, easy setup is guaranteed.
- **Slitting tools:** Simple separation contours, the cutting of formed areas or visible edges without nibbling marks can all be performed flexibly and inexpensively.
- **Forming tools:** By forming the sheet plastically you can do a variety of forming operations. TRUMPF tools enable you to perform the complete processing spectrum reliably on one machine. A very high processing speed and part quality without any visible forming marks can be achieved by using roller technology. Furthermore, we also offer you the appropriate solution for specialized applications such as deburring.
- **Embossing and marking tools:** Whether you are looking to inscribe serial numbers, the year of manufacture or your corporate logo, we can provide the tools you need for fast and efficient marking.
- **Tooling accessories:** Make set-up and maintenance easier and increase the service life of your tools. Achieve optimal results with precisely calibrated and perfectly sharpened tools.

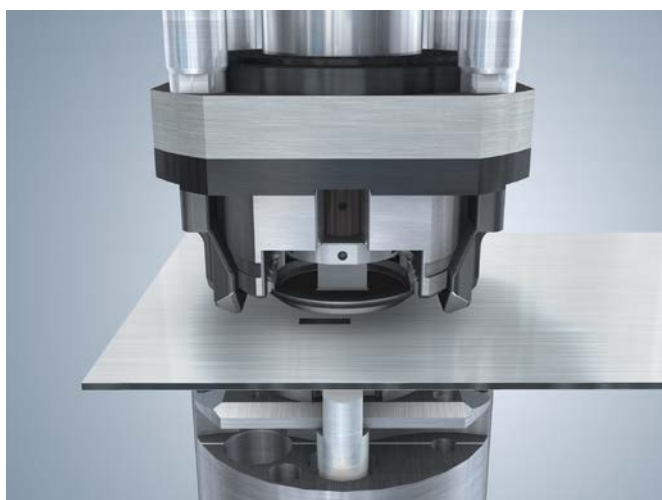


Slitting tool MultiShear.



Roller deburring tool.

## Intelligent punching.



The wear-free ram guidance system combined with the mechanism that actively retracts the punch ensures accurate results and maximum process reliability.



Thanks to 360° rotation, you can punch at whatever angle you like.

### Versatile and cost-efficient thanks to 360° tool rotation.

Tools fit snugly into the punching head. One of the biggest advantages of the head design is that it can rotate any tool to the angle that is required, regardless of the tool's shape, size or position in the magazine.

#### Benefits of 360° rotation at a glance:

- Ability to position tools at any angle.
- Easily programmed.
- More efficient use of materials thanks to versatile sheet layout.
- Fast changeover times.
- Low tool costs.

# Totally flexible.

## ► Skeleton-free processing

The scrap skeleton that remains on the machine in a conventional production strategy is time-consuming to remove. In skeleton-free processing, by contrast, the sheet is totally pierced, leaving not even an edge strip behind. This offers multiple advantages.

### Process-reliable

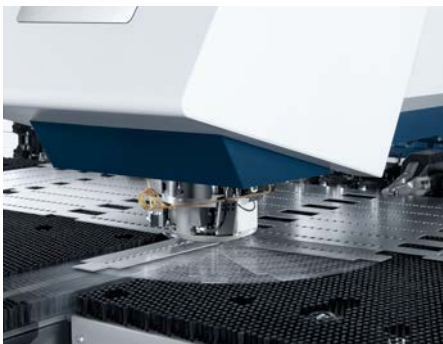
- Finished parts can be unloaded with higher process reliability.
- Small parts are unloaded reliably even when the part chute is open.
- Residual pieces of sheet metal are automatically cut up and removed.

### Material-efficient

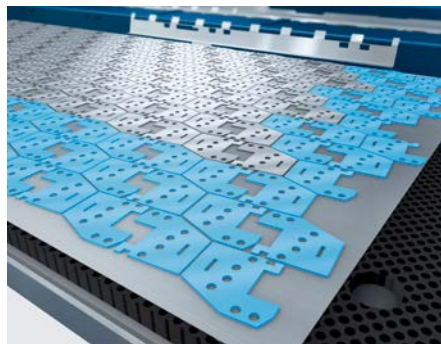
- Common cuts ensure optimal material usage.
- An average of 10% higher sheet utilization reduces material costs.
- Smaller bits of residual material simplify logistics and yield higher scrap prices.

### Operator-friendly

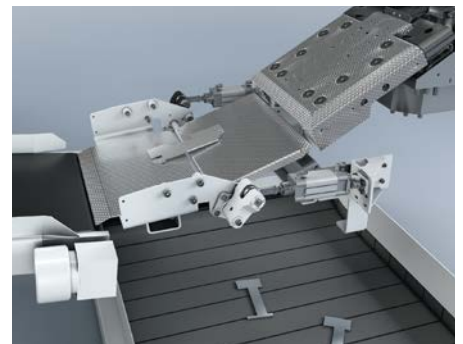
- Working without a scrap skeleton increases safety.
- Residual pieces of sheet metal can be sorted by material fully automatically.
- The sorting flap routes good parts and scrap to specific containers.



If necessary, the machine can turn your parts before unloading.



Material-efficient thanks to skeleton-free processing.



The sorting flap separates scrap from good parts.

# TruPunch 5000

## Productive high-end machine.

The TruPunch 5000 sets new standards when it comes to productivity. This is facilitated by features such as the zero-backlash drives, which permit maximum axis accelerations. You will also benefit from the high rotation speed of the C axis which enables extremely fast tapping and the productive machining of complex contours. Thanks to the powerful hydraulic drive, you can punch at rates of up to 1,600 strokes per minute and mark at rates of up to 2,800 strokes per minute.

## Smart, reliable production.

Thanks to its integrated smart functions, the machine thinks for itself: It identifies potential problems and is even able to

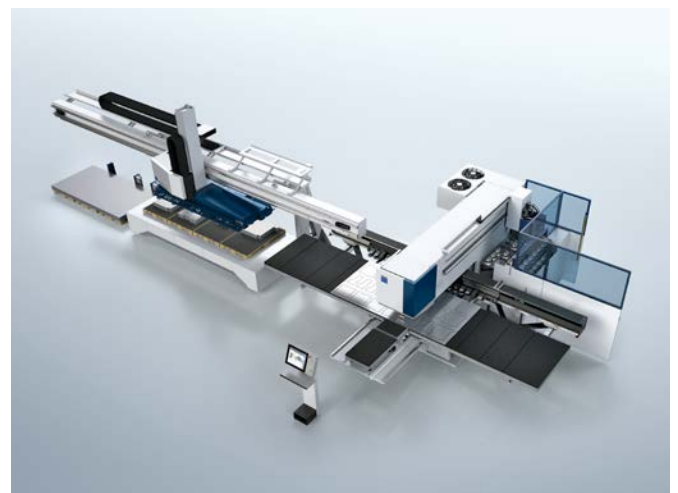
resolve them in some cases. In any event, these intelligent functions make the operator's job easier, whether loading with the SheetMaster or unloading with the GripMaster. The variable vacuum slug removal feature adapts the suction power precisely to match the material being machined.

## Nimble and versatile.

Using retractable clamps, you reach the clamp dead area without the need for resetting, saving yourself a lot of valuable time that would otherwise be spent on programming. This allows you to process the entire sheet in a single operation and to do so quickly, flexibly, and with high precision. From forming to roller deburring: with the TruPunch 5000, you can perform a wide range of tasks.

## TruPunch 5000: Benefits at a glance.

- 1 Unbeatable productivity.
- 2 Reliable production.
- 3 Versatile forming.
- 4 Optimal part quality.
- 5 Individual automation.



Intelligent automation.



## Taking quality into a new dimension.

The active die ensures that parts are scratch-free. When positioning the sheet, the die is lowered so that it does not come into contact with the material being processed. With the active forming stroke from below, the die achieves form sizes and heights that were previously unattainable. Thanks to these useful features, you can attain maximum part flexibility and part quality. As an option, the TruPunch 5000 is also available with programmable stripping force for imprint-free surfaces.



TruPunch 5000 – the fastest punching machine in the world.

## Earn more automatically.

You can choose the level of automation for your TruPunch 5000 that suits you and expand it in stages. Your benefits with automation:

- Increased machine utilization through a variety of automation components such as the SheetMaster.
- Expanded storage capacity and optimal tool change speed thanks to the ToolMaster Linear automation for 18, 54 or 90 tools.
- Increased process reliability in automated multishift operations with the help of smart functions.



Scratch-free processing with active die.



Maximum flexibility thanks to retractable clamps.





<b>Technical data:</b>		
	<b>TruPunch 5000 medium format</b>	<b>TruPunch 5000 large format</b>
Work area (X x Y) <sup>[1]</sup>	2500 x 1250 mm	3050 x 1550 mm
<b>Capacity</b>		
Max. sheet thickness	8 mm	8 mm
Max. punching force	220 kN	220 kN
Active presser foot force	4.5 – 20 kN	4.5 – 20 kN
Max. workpiece weight	200 kg	230 kg
<b>Speeds</b>		
X axis	100 m/min	100 m/min
Y axis	60 m/min	60 m/min
Simultaneous (X and Y)	116 m/min	116 m/min
C axis	500 rpm	500 rpm
Max. stroke rate when punching (E = 1 mm)	1600 1/min	1350 1/min
Max. stroke rate when marking	3000 1/min	3000 1/min
<b>Max. acceleration<sup>[2]</sup></b>		
X axis	25 m/s <sup>2</sup>	22 m/s <sup>2</sup>
Y axis	12 m/s <sup>2</sup>	10 m/s <sup>2</sup>
C axis	350 1/s <sup>2</sup>	350 1/s <sup>2</sup>
<b>Tools</b>		
Linear magazine	18 tools with 3 clamps	21 tools with 4 clamps
No. when using MultiTool	18 – 180	21 – 210
MultiTool	5/10 stations	5/10 stations
<b>Tool change time</b>		
Single tool	< 3 s	< 3 s
MultiTool	0.3 s	0.3 s
<b>Accuracy<sup>[3]</sup></b>		
Positioning accuracy Pa	± 0.1 mm	± 0.1 mm
Repeatability Ps	± 0.03 mm	± 0.03 mm
<b>TRUMPF CNC control</b>	Siemens Sinumerik 840D SL	Siemens Sinumerik 840D SL
<b>Programmable unloading of parts</b>		
Max. part size with part removal flap	500 x 500 mm	500 x 500 mm
<b>Space requirements<sup>[4]</sup></b>		
Including safety barriers	6760 x 6100 mm	7600 x 7000 mm
<b>Power consumption</b>		
Average power consumption during production	9.5 kW	9.5 kW
Active auto-shutdown	0.5 kW	0.5 kW

<sup>[1]</sup> Without repositioning.

<sup>[2]</sup> Up to 100 kg sheet weight.


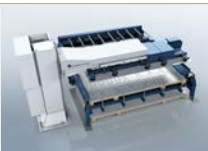
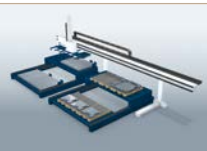


<sup>[3]</sup> Achievable workpiece accuracy depends on various factors, including workpiece type, its pretreatment, sheet size and position in the work area. In accordance with VDI/DGQ 3441. Measuring length 1 m.

<sup>[4]</sup> Approximate values. Exact specifications can be found in the most recent installation plan. Subject to alteration. Only specifications in our offer and order confirmation are binding.

# Components that pay off.

Efficient, economical production through automation.

- Everything from a single source: there are no interface problems.
- Optimized material flow and enhanced process reliability boost productivity.
- Increase capacity by running highly automated multishift operations up to 24 hours a day.
- Careful material handling ensures more efficient material usage.
- Clearly organized storage gives you fast access to materials and saves space.

	SheetMaster	SheetMaster Compact	Cart systems	SortMaster Pallet	SortMaster Box
					
<b>Compatible machines:</b>					
TruPunch 2000		■			
TruPunch 3000	■	■	■		
TruPunch 5000	■		■	■	■

<sup>[1]</sup> With integrated tool changer (optional with SheetMaster).

<sup>[2]</sup> With option "skeleton-free processing".

**SheetMaster:** Fast and reliable loading and unloading, stacking and sorting.

**SheetMaster Compact:** Space-saving and inexpensive entry-level automation solution for loading sheets and unloading microjoint sheets and scrap skeletons.

**Cart systems:** Double your loading and unloading capacity by deploying versatile storage and sorting solutions for raw materials and finished parts.

**SortMaster Pallet:** Sort and stack finished parts on up to 6 europallets.

**SortMaster Box:** Sort finished parts into 4 standardized, stackable containers.

**SortMaster Box Linear:** Virtually scratch-free sorting of finished parts into containers traveling on horizontal rails.

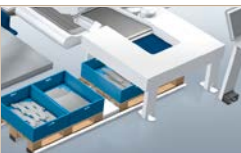


**GripMaster:** Fast and reliable removal and stacking of sheet skeletons parallel to the loading process.

**ToolMaster Linear:** Modular tool storage system for 18, 54 or 90 tool stations.

**DisposeMaster:** Conveniently sorts shredded sheet skeletons and stubs according to material type.

**TruStore:** Modular and upgradable storage and shelving system provides a well-organized, space-saving storage solution.

**Stopa storage solutions:** For special requirements we also offer highly customizable storage solutions in cooperation with our partner, Stopa.

SortMaster Box Linear	GripMaster	ToolMaster Linear	DisposeMaster	TruStore	Stopa storage solutions
					
■		[1]	■ [2]	■	■
■	■	■		■	■

Software:

Programmed  
for success.



TruTops Boost takes you faster than ever from the geometry to the NC program.

TRUMPF's TruTops Boost is the software solution for designing and programming laser, punching and bending machines that lets you increase your performance at the touch of a button. The software combines all order processing steps, from the geometry through to the completed NC program, in a single all-in-one solution. Its intuitive operating philosophy guides you through the software in a simple, process-oriented manner while allowing you to keep an overview of your orders. Thanks to its numerous automated functions, the innovative Boost technology also makes you unbeatably fast. With it, you become more profitable and boost your business!

Talk to your TRUMPF contact to find out when TruTops Boost will be available to you. Until then, our TruTops Punch software can offer you optimum support. We recommend our TruTops Fab software as the ideal production control system for your requirements.

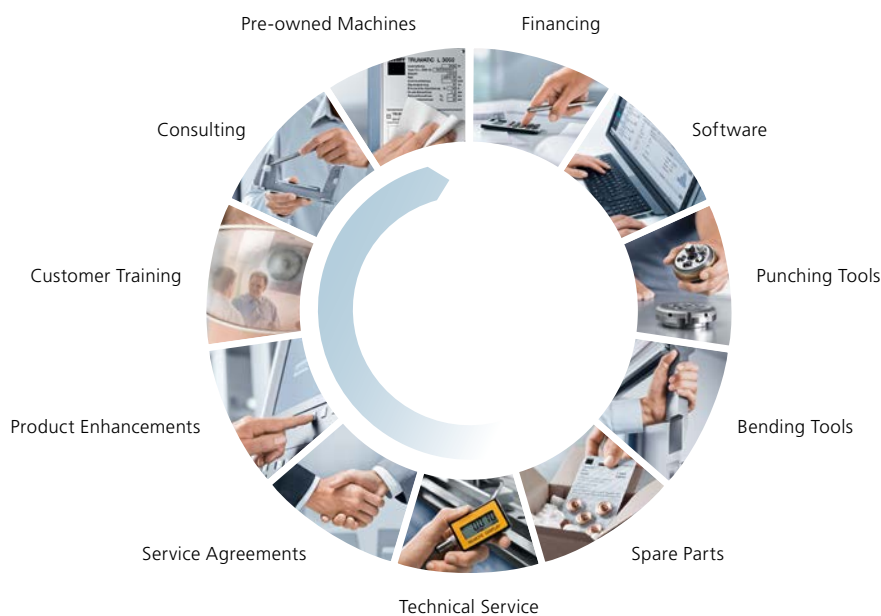
TruTops Boost: Your benefits at a glance.

- From geometry to NC program faster than ever before.
- Everything monitored: Single software solution for all order processes.
- Everything under control: Intuitive user interface supports flexible working.
- Everything faster: Boost technology with productive automated functions.
- Innovative Boost technology + new operating philosophy = TruTops Boost

TruServices:

Service like  
no other.

Throughout the lifecycle of your machine.



Regardless of the TRUMPF technology you use, you will always get the best service. Thanks to the award-winning spare parts logistics at TRUMPF, we guarantee the highest availability of spare parts and provide you with all the products in the shortest time. TRUMPF offers you individual financing solutions quickly and without a lot of paperwork. Our service technicians are highly trained and always available when you need them. A Service Agreement is the ideal way of ensuring the highest availability of your machine. Should your requirements change,

we have flexible upgrading options and technical innovations that will make your machine even better. Our broad range of training courses with experienced trainers and hands-on practice will also give you a head start in understanding and operating your machine.

The TRUMPF Group ranks among the world's leading manufacturers of production technology and industrial lasers. Technical and efficient solutions for our customers have been our focus since 1923. As a leading technology supplier, TRUMPF is a one-stop shop for all of your technology needs: machines, automation, storage technology and services.

TRUMPF is certified according to ISO 9001:2008  
(for additional information see [www.trumpf.com/en/quality](http://www.trumpf.com/en/quality))

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