



TruPunch:

A new standard
in punching
efficiency.

Uniquely efficient.

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

TruPunch machines are extremely economical and efficient. In particular, they use energy and material resources very sparingly. Our portfolio would not be complete without a wide choice of high-quality punching tools made by TRUMPF.

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 entry into punching. It is particularly easy to operate, offers good value for money, and takes up little space.



TruPunch 3000

Resource-efficient universal machine. The world's first punching machine which does not leave a scrap skeleton, 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 and part quality. Its total forming ability and custom automation guarantee it is well suited for the broadest range of applications. This machine also leaves no scrap skeleton.

efficiency+

We strive to work cost-efficiently and responsibly through the sensible use of resources.

- Skeleton-free punching increases your sheet utilization by 10% on average and reduces material costs accordingly.
- Equipped with either a hydraulic or electric punching head, each TruPunch machine is always extremely energy-efficient.
- Their low use of compressed air, materials and electricity contributes to the all-around conservation of resources.

Why TruPunch is impressive.

Quality standard contours and forming with the punching head.



Punch in three dimensions. The punching head creates holes as well as three-dimensional contours such as extrusions and tapped holes. You can process your parts entirely on one machine, with no need for secondary operations.

- 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 parts are accessible from three sides. There is plenty of room for loading and unloading – manually or automatically. The machine's high level of stability also guarantees accuracy and scratch-free parts.



- Access to the machine from three sides.
- High accuracy.
- Scratch-free parts.
- Fast unloading with parts chute.
- Modular automation.

Flexible punching tools.

TRUMPF has been supplying the highest quality original punching tools for 40 years. We have the widest range of tools on the market.

- **Punching tools:** TRUMPF can provide you with the tool you need for any geometry or separation cut you are processing.
- **Forming tools:** Sheet metal can be processed into an endless number of shapes through plastic deformation. TRUMPF forming tools enable complete sheet processing on a single machine. With the new size 5 tools, even larger forms can be produced with standard tools.
- **Roller tools:** Roller technology makes forming and cutting operations even faster and 360° rotation makes it possible to fabricate just about any contour.
- **Embossing and marking tools:** These special tools enable you to inscribe serial numbers, the year of manufacture, your corporate logo and other markings quickly and cost-efficiently.
- **Tools for special purposes:** We can also supply tailor-made tools for special operations, such as deburring tools capable of producing high-quality edges. Our specialists can also develop customized punching tools according to your precise specifications. With our in-house manufacturing facilities and intensive testing, the best results are guaranteed. Custom punching tools can be delivered within a matter of days.
- **Tooling accessories:** Tooling accessories make setup and maintenance easier and prolong the service life of your tools. Making sure your punching tools are precisely set and regularly reground also plays an essential role in achieving optimum results.
- **Integrated tool management:** The system helps you to keep track of your tools at all times, enabling you to optimize setup processes and tool deployment.

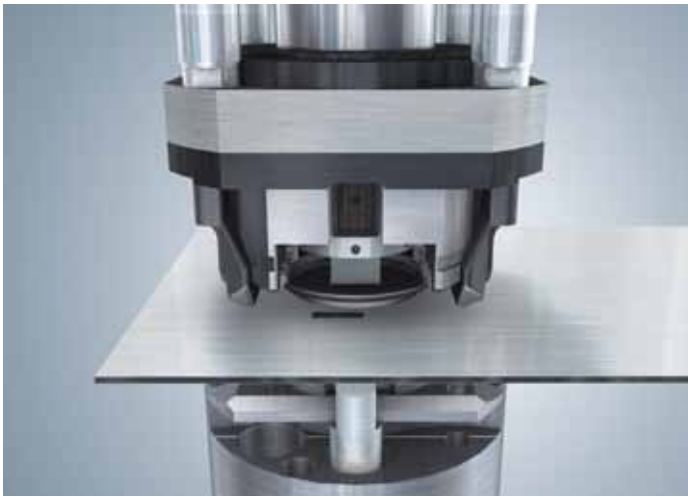


Roller deburring tool



Deburring MultiTool

Intelligent punching.



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



With 360° rotation, you can punch at any angle.

Versatile and cost-efficient with 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 due to versatile sheet layout.
- Fast changeover times.
- Low tool costs.

Flexible without limits.

► 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, the sheet is completely processed, leaving not even an edge strip behind. This offers multiple advantages.

Process-reliable

- Finished parts can be unloaded reliably.
- 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

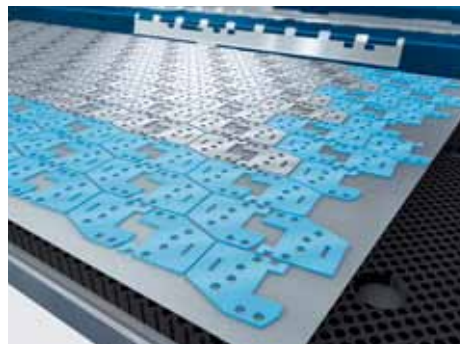
- Common cuts ensure optimal material usage.
- An average of 10% higher sheet utilization reduces material costs.
- Smaller pieces of residual material simplify logistics and yield higher scrap prices.

Operator-friendly

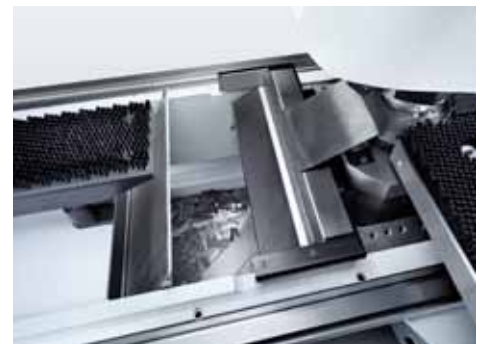
- Working without a scrap skeleton increases safety.
- Residual pieces of sheet metal can be sorted by material.
- The sorter routes good parts and scrap to specific containers.



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



Material-efficient with skeleton-free processing.



The sorter separates scrap from good parts.

TruPunch 1000



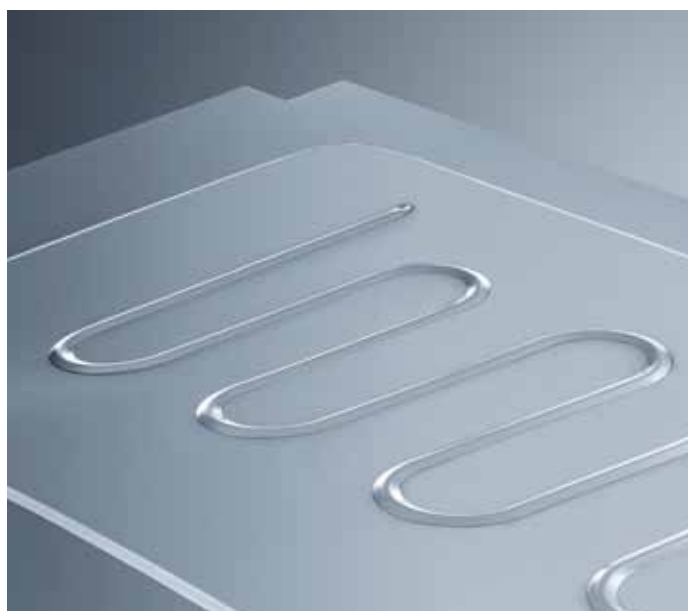
Shop floor programming on the TruPunch 1000.

TruPunch 1000:
Benefits at a glance.

- 1 The most versatile machine in its class.
- 2 Intuitive user interface.
- 3 Low operating costs, even at low capacity.
- 4 Simple online programming.
- 5 Minimal footprint.



Tools and technologies used: Punching, roller deburring, forming: thread with upward and downward extrusion, upward thread punching, cup, clip and hinge, bridges, MultiBend, embossing.



Technologies used: roller technology.

Economical entry-level machine.

The TruPunch 1000 is the ideal punching machine for first-time professional users. It requires minimal space and is very easy to operate, yet is capable of handling the full range of basic applications on medium-format sheet metal. As with other TRUMPF punching machines, forming can be performed in a single operation without repositioning. The TruPunch 1000 enables you to respond quickly and with flexibility to low-volume orders and batch sizes.

Simple punched parts can be programmed online in a few short steps with the help of the TruTops Punch Basic software. The necessary data is input with a user-friendly touch screen with intuitive menu prompting. The full version of TruTops Punch can be called up on request if required to process more complex parts.





Technical data:	
	TruPunch 1000
Work area (X x Y)	80 x 50 in.
Capacity	
Max. sheet thickness	0.25 in.
Max. punching force	19 tons
Max. clamping force	up to 2.5 tons
Max. workpiece weight	330 lbs
Speeds	
X axis	3150 ipm
Y axis	2165 ipm
Simultaneous (X and Y)	3820 ipm
C axis	180 rpm
Max. stroke rate when punching (E = 1 mm)	600 1/min
Max. stroke rate when marking	1300 1/min
Max. acceleration^[1]	
X axis	394 in/s ²
Y axis	197 in/s ²
C axis	175 rad/s ²
Tools	
Linear magazine	15 tools with 2 clamps (optional 3 rd clamp)
No. when using MultiTool	15 – 150
MultiTool	5/10 station
Tool change time	
Single tool	4.4 s
MultiTool	2.2 s
Accuracy^[2]	
Positioning accuracy Pa	± 0.004 in.
Repeatability Ps	± 0.0012 in.
TRUMPF CNC control	Bosch PNC
Programmable parts chute	
Max. part size when using fixed chute	7 x 6 in.
Max. part size when using part slider	18 x 20 in.
Space requirements^[3]	
Including safety barriers	236 x 229 in.
Power consumption	
Average power consumption	7 kW
In standby mode	0.7 kW

^[1] Up to 220 lb. sheet weight.

^[2] Achievable workpiece accuracy depends on various factors including workpiece type, its pre-treatment, sheet size and position in the work area. In accordance with VDI/DGQ 3441. Measuring length 39 inches.

^[3] Approximate values. Exact specifications can be found in the most recent installation plan.

TruPunch 3000

Resource-efficient universal machine.

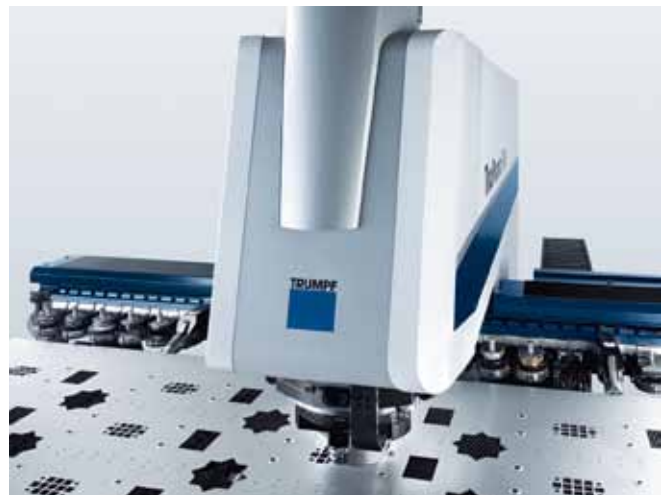
TRUMPF is the first manufacturer in the world to offer a punching machine designed for skeleton-free processing: the TruPunch 3000. This innovation reduces material requirements by an average of 10%, increases process reliability and is extremely user-friendly. With its electric punching head and an average power consumption of 5.9 kW, it is a very energy-efficient machine.

Scratch-free material handling

The adjustable die height enables you to process sheet thicknesses up to 0.25 inches and obtain high quality, virtually scratch-free results. For even more convenience, this compact machine can be equipped with an extensive range of automation options designed to make ideal use of the space available.

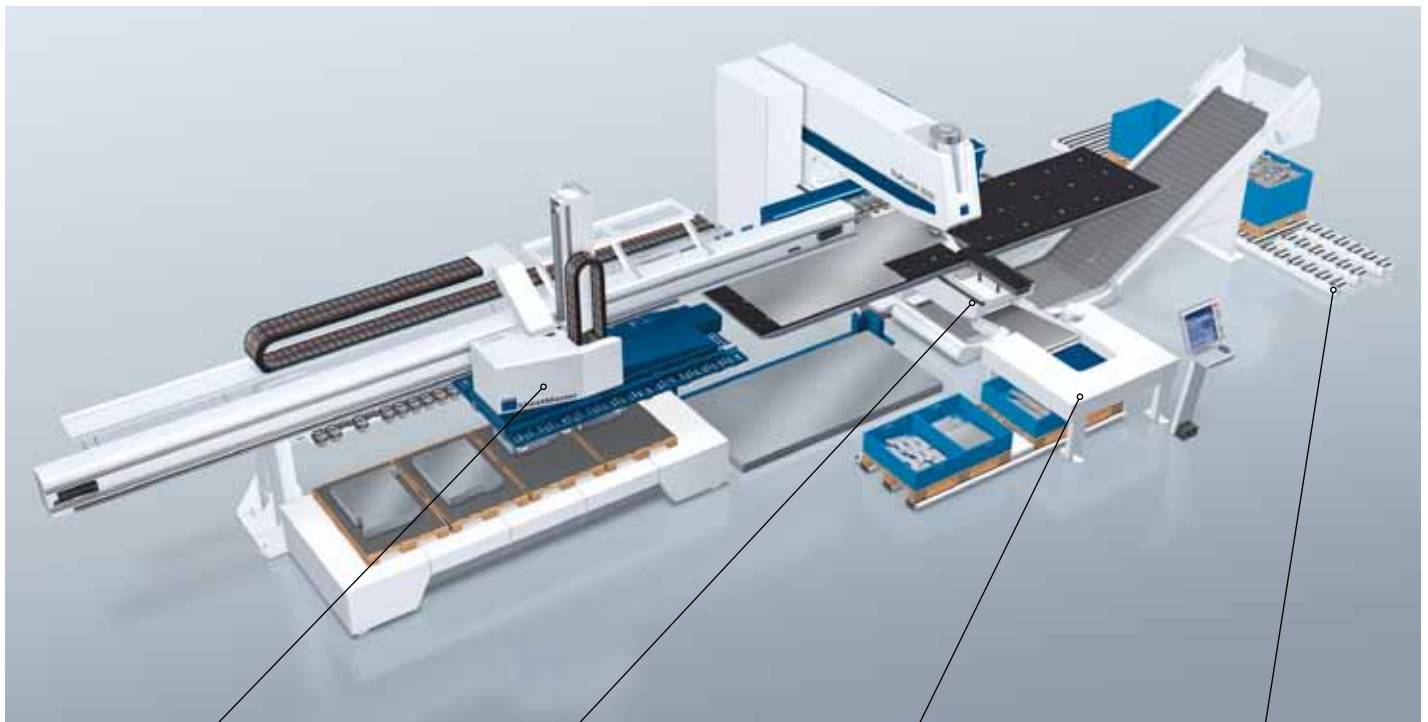
TruPunch 3000:
Benefits at a glance.

- 1 High resource efficiency.
- 2 Skeleton-free processing.
- 3 Scratch-free material handling.
- 4 Extensive automation.
- 5 Small machine footprint.



Energy-efficient electric punching head.

Extensive automation.



SheetMaster:

Performs speedy and process reliable loading and unloading, stacking and sorting. Optional tool changer and space for additional tools.



Sorter:

Separates good parts from scrap.



SortMaster Box Linear with part slider:

Ensures virtually scratch-free sorting of good parts into containers, moving in a linear direction.



DisposeMaster:

Sorts sheet metal scrap, including slugs, according to material type.



Technical data:		
	TruPunch 3000 medium format	TruPunch 3000 large format^[4]
Work area (X x Y)	100 x 50 in.	120 x 60 in. ^[4]
Capacity		
Max. sheet thickness	0.25 in.	0.25 in.
Max. punching force	20 tons	20 tons
Max. clamping force	up to 2.5 tons	up to 2.5 tons
Max. workpiece weight	330 lbs.	480 lbs.
Speeds		
X axis	3543 ipm	3543 ipm
Y axis	2362 ipm	2362 ipm
Simultaneous (X and Y)	4252 ipm	4252 ipm
C axis	330 rpm	330 rpm
Max. stroke rate when punching (E = 1 mm)	1000 1/min	900 1/min
Max. stroke rate when marking	2500 1/min	2500 1/min
Max. acceleration^[1]		
X axis	472 in/s ²	472 in/s ²
Y axis	240 in/s ²	200 in/s ²
C axis	350 1/s ²	350 1/s ²
Tools		
Linear magazine	18 tools with 2 clamps	17 tools with 3 clamps
No. when using MultiTool	18 – 180	17 – 170
MultiTool	5/10 stations	5/10 stations
Tool change time		
Single tool	3.0 s	3.0 s
MultiTool	0.3 s	0.3 s
Accuracy^[2]		
Positioning accuracy Pa	± 0.004 in.	± 0.004 in.
Repeatability Ps	± 0.0012 in.	± 0.0012 in.
TRUMPF CNC control	Bosch Rexroth MTX CMP70	Bosch Rexroth MTX CMP70
Programmable parts chute		
Max. part size	20 x 20 in.	20 x 20 in.
Space requirements^[3]		
Including safety barriers	197 x 256 in.	228 x 287 in.
Power consumption		
Average power consumption	5.9 kW	5.9 kW
Punching head	Electric	Electric

^[1] Up to 220 lb. sheet weight.

^[2] Achievable workpiece accuracy depends on various factors, including workpiece type, its pre-treatment, sheet size and position in the work area. In accordance with VDI/DGQ 3441. Measuring length 39 inches.

^[3] Approximate values. Exact specifications can be found in the most recent installation plan.

^[4] With repositioning.

TruPunch 5000

Productive high-end machine.

The TruPunch 5000 offers you unbeatable productivity. It punches at a hit rate of up to 1,400 strokes per minute or 2,800 strokes per minute when marking, setting the global benchmark for top performance.

Its skeleton-free processing concept makes the TruPunch 5000 easy to operate, guarantees efficient use of materials and ensures a consistently reliable process. On average it increases sheet utilization by 10%, enabling you to achieve significant savings on material costs.

The active die technology ensures scratch-free parts and makes it possible to produce larger punched and formed parts than with other machines. By opting for the TruPunch 5000, maximum possible part quality is guaranteed from a machine capable of handling a diverse range of workpiece requirements and offering unparalleled process reliability.

You can choose the automation options that best suit your requirements and more can be added as needed. The ToolMaster, for example, enables you to select and set up to 70 tools from the magazine completely automatically.

TruPunch 5000: Benefits at a glance.

- 1 Unbeatable productivity.
- 2 Skeleton-free processing.
- 3 Scratch-free material handling.
- 4 Custom automation.
- 5 Maximum range of forming operations.



Intelligent automation.

Active die technology: the quality advantage.

- **Scratch-free processing:**

The active die enables you to produce scratch-free punched and formed parts. It sinks below the level of the work area while the sheet is being positioned to avoid metal-on-metal contact between the processing station and the workpiece.

- **Advanced forming capabilities:**

With the active die, a rising stroke is used to form the sheet from below, enabling you to achieve larger and deeper forms than ever before. Downward forming strokes can also be performed reliably by lowering the die.

- **Optimized process reliability:**

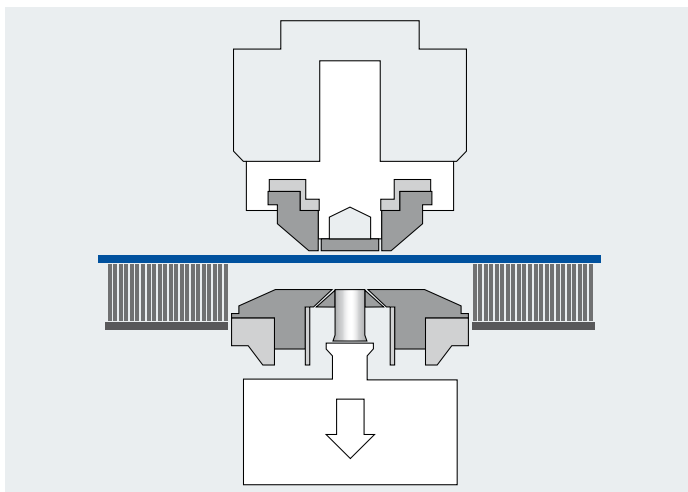
Due to the height of the dies used in forming operations, there is a risk of collision when cutting out large internal sections. The active die prevents this type of situation.

- **More efficient use of materials:**

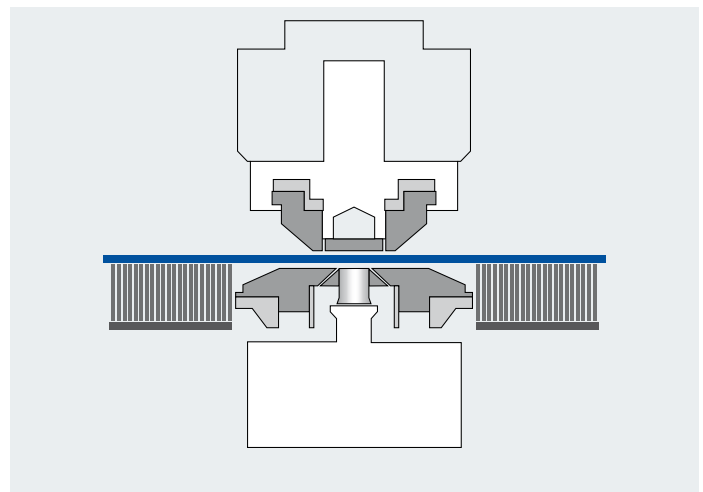
On a machine with an active die, the sheet always lies flat on the work area. This enables you to process forms closer to the edge of the clamp. Sheet utilization is improved and less material is wasted.

- **More user-friendly:**

Your machine is easier to program because you do not have to program around the die. And, because there is less contact between metal surfaces the machine operates more quietly and tools require less maintenance.



Scratch-free sheet positioning with the active die.



Sheet positioning with a conventional die.





Technical data:		
	TruPunch 5000 medium format	TruPunch 5000 large format
Work area (X x Y) ^[1]	100 x 50 in.	120 x 60 in.
Capacity		
Max. sheet thickness	0.3 in.	0.3 in.
Max. punching force	25 tons	25 tons
Active clamping force (programmable in increments)	up to 2.5 tons	up to 2.5 tons
Max. workpiece weight	440 lbs.	507 lbs.
Speeds		
X axis	3937 ipm	3937 ipm
Y axis	2362 ipm	2362 ipm
Simultaneous (X and Y)	4567 ipm	4567 ipm
C axis	330 rpm	330 rpm
Max. stroke rate when punching (E = 1 mm)	1400 1/min	1200 1/min
Max. stroke rate when marking	ca. 2800 1/min	ca. 2800 1/min
Max. acceleration^[2]		
X axis	787 in/s ²	709 in/s ²
Y axis	394 in/s ²	354 in/s ²
C axis	350 1/s ²	350 1/s ²
Tools		
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
Tool change time		
Single tool	< 3 s	< 3 s
MultiTool	0.7 s	0.7 s
Accuracy^[3]		
Positioning accuracy Pa	± 0.004 in.	± 0.004 in.
Repeatability Ps	± 0.0012 in.	± 0.0012 in.
TRUMPF CNC control	Siemens Sinumerik 840D	Siemens Sinumerik 840D
Programmable parts chute		
Max. part size	20 x 20 in.	20 x 20 in.
Space requirements^[4]		
Including safety barriers	266 x 240 in.	299 x 276 in.
Power consumption		
Average power consumption	11.2 kW	11.2 kW
In standby mode	0.7 kW	0.7 kW

^[1] Without repositioning.

^[2] Up to 220 lb. sheet weight.


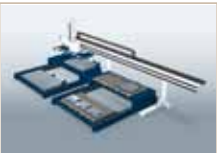


^[3] Achievable workpiece accuracy depends on various factors, including workpiece type, its pre-treatment, sheet size and position in the work area. In accordance with VDI/DGQ 3441. Measuring length 30 inches.

^[4] Approximate values. Exact specifications can be found in the most recent installation plan.

Components that pay off.

Efficient, economical production through automation.

- Everything from a single source means 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	Cart systems	SortMaster Box	SortMaster Box Linear
				
Compatible machines:				
TruPunch 3000	■	■		■
TruPunch 5000	■	■	■	■
TruPunch 5000 with skeleton-free processing option	■	■		■

¹⁾ With integrated tool changer (optional with SheetMaster).

SheetMaster – Fast and reliable loading and unloading, stacking and sorting.

Cart systems – Double your loading and unloading capacity by deploying versatile storage and sorting solutions for raw materials and finished parts. Solutions with tracks and belt drives are available.

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.



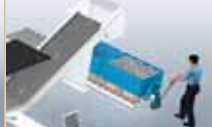


GripMaster – Fast and reliable removal and stacking of sheet skeletons parallel to the loading process.

ToolMaster – Changes tools in less than 9 seconds and increases capacity, making up to 70 tools available at once.

DisposeMaster – Conveniently sorts shredded sheet skeletons and slugs according to material type.

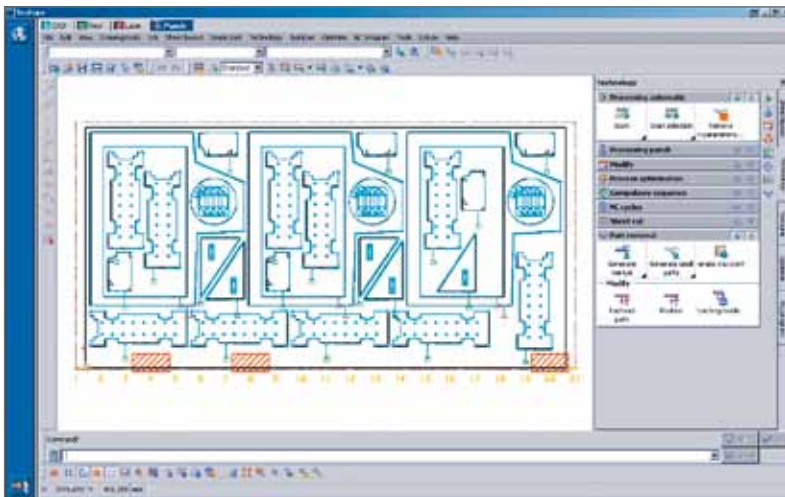
TruStore – Modular and upgradable storage and shelving system provides a well-organized, space-saving storage solution.

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

GripMaster	ToolMaster	DisposeMaster	TruStore	Stopa storage solutions
				
	[1]	■		
■	■		■	■
	■	■	■	■

Software:

Programmed
for success.



Our TruTops Punch programming software helps you to take full advantage of the potential of our TruPunch machines. No other comparable product offers the same combination of process reliability and high-speed NC coding. Automatic features enable fast and efficient programming. Nesting solutions are perfectly tailored to your specific requirements and the scrap skeleton management function ensures the best possible material utilization. This impressive functionality is topped off with a user-friendly interface that includes powerful, yet easy-to-use simulation options.

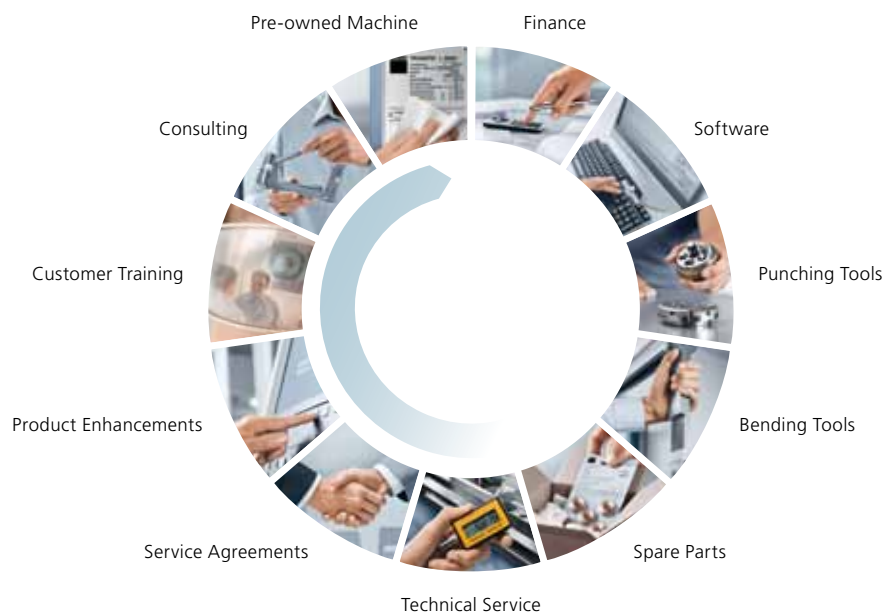
TruTops Punch: Benefits at a glance.

- Outstanding process reliability combined with fast NC programs.
- Full control over workpiece machining and process parameters.
- A product of TRUMPF's integrated design process – from concept to production planning.
- Consistent modern operating concept based on ergonomic principles and efficiency.
- Job interface saves time when entering and administering job data.
- Optimized use of materials and skeleton-free production.

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. And, thanks to TRUMPF's award-winning spare parts logistics, all parts can be shipped in the shortest time possible. TRUMPF Finance offers individual financing solutions quickly and without a lot of paperwork. Our service technicians are highly trained and are always available when you need them. A Service Agreement is the ideal way of ensuring the best usability of your machine.

Should your requirements change, we have flexible upgrade 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 give you a head start towards 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

Ident. no. 0372706-20-09-12 – Specifications subject to change without notice.

