

TRUMPF



Automation

Keep a tight
grip on your
production



Well-equipped for the future

Up to 80% of your production time is attributed to indirect processes. In order to produce economically in the future, it is worthwhile having these under control. In this regard, networking becomes a factor for success. TRUMPF Smart Factory Solutions connect machines, automation, software, and services. This creates a reliable flow of material and information. Employees can concentrate on their core tasks, delivery reliability increases, growth can be planned for. Create the basis for a successful future today.

Product overview
on the back →

Product overview

SOFTWARE

		Intelligent software solutions for the entire sheet metal process chain					16
		TruLaser		TruLaser Tube		TruPunch TruMatic	TruBend
		2D LASERS		LASER		PUNCHING +	BENDING
				TUBE CUTTING		PUNCH LASER	
	LOADING	LoadMaster 20	LiftMaster 22	LiftMaster Compact 28	LiftMaster Linear Basic 26	LiftMaster Linear 30	LiftMaster Store 30
	UNLOADING						
	SORTING	SortMaster 32					
	AUX. PALLET OPER.	LiftMaster 22					
	DISPOSAL						
				Part-removal station 36			
						SheetMaster 42	TruBend Cell 5000 56
						SheetMaster Compact 44	TruBend Cell 7000 58
						SortMaster Compact 46	TruBend Center 7030 60
						Cart systems 48	
						SortMaster Pallet 46	
						SortMaster Box 48	
						SortMaster Box Linear 48	
				Waste conveyor belt 38			
						GripMaster 50	
						ShearMaster 50	
						DisposeMaster 50	
	TOOL HANDLING						
						ToolMaster 52	
						ToolMaster Linear 52	ToolMaster 62
	STORAGE + LOGISTICS SYSTEMS						
		TruStore Series 1000					66
		TruStore Series 3000					68
		Material buffer					70
		Large storage systems					72



Transparency is the solution

Searching for materials takes time. Instead, get it “in time” through a click of the mouse. This saves valuable working time and makes you more productive.



Gain an overview

Produce more economically

You save space and can utilize your machines better. This means you produce more economically – even around the clock. Your unit costs go down and you can plan more freely.



Expand competitive advantages

Satisfied employees – satisfied customers

Forward-looking production and optimized procedures ensure orderliness and stability. A relaxed atmosphere prevails at the company, and customers value your reliability.



Create leeway

Added value instead of monotony

Automate monotonous tasks. This allows employees to concentrate on their core tasks, and be more motivated. Your part quality increases at the same time.



Boost motivation and quality

Automation in practice

The image shows the fully automated STOPA large-scale storage system at KNOLL Maschinenbau. The store is 70 m long and features over 1,200 storage locations as well as 13 loading and unloading stations.



Link to customer story:
www.trumpf.info/jrzb9d

Smart Factory – multiple options, one experienced partner

You, as a sheet metal processor, face an increasing number of product variants and shorter order times. You therefore need a strategy to remain competitive in the future. Doing nothing is not an option. Build on your strengths and see the path to a connected factory as an opportunity. You won't be alone. We know every production differs, and therefore also your particular situation and goals. We would love to be your partner on your journey to a Smart Factory. Until your production works the way you want it to.

These customers joined us on their journey to networked production:

Autolink Korea



Goal achieved with transparency

Jaemin Park had great plans for his job shop Autolink. But daily business simply got in the way of the Korean company founder. The move to a new production site combined with TRUMPF Smart Factory Consulting, gave him a new lease of life.

SCHRAG Kantprofile GmbH



Extention, not a new build

SCHRAG Managing Director Thomas Goswin wants to strengthen his business by building a new production facility. His plan was to increase his competitive advantage by automation. For the planning of his new factory he engaged the Smart Factory Consultants from TRUMPF. Detailed analysis proved there was a convincing alternative!

Airforce Taiwan



The clever Miss Chang

Airforce Laser in Taiwan shows how Industry 4.0 in sheet metal production works. The medium-sized company produces highly automatized – thanks to Smart Factory Solutions from TRUMPF.

Link to customer story:
www.trumpf.info/3t58lo

Link to customer story:
www.trumpf.info/cy127k

Link to customer story:
www.trumpf.com/s/airforce-laser

Choose the best – choose TRUMPF

How do you prepare your production for the demands of a networked future? There is no one-size-fits-all solution. Except for the right partner: develop an entire system that is harmonious and matches your production, together with us. Because when machines, software, services, storage, and automation work together in harmony, you can produce quickly, efficiently, and with flexibility, today and in future.

“TRUMPF’S innovative Smart Factory Solutions allow you to implement your digitalized production step by step. With this in mind, no two paths are alike because you can combine the separate parts of TRUMPF Smart Factory Solutions individually.”

Patrick Bauer, Product Marketing – Automation & Processes

Your experienced partner

>35 years

expertise in the market

>250

successfully realized projects per year

>50

new Smart Factories per year

>6,500

machines connected

>2,500

automated sheet metal processing systems realized worldwide

1

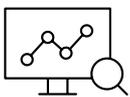
dedicated contact



Passionate about finding solutions

With TRUMPF's all-around worry-free service, you can achieve a turnkey Smart Factory in just 4 steps. We accompany you every step of the way from conceiving the initial idea to making it a reality. What's special about this approach is that you have a dedicated contact at your side for the entire project.

From requirement to turnkey Smart Factory in 4 steps



1. Status quo analysis

To start, our advisors analyze all of your sheet metal processes. The result reveals to what extent you can optimize your manufacturing environment.



2. Planning

A central project planning team examines the overall system. We provide you with a 3D layout plan, and we also simulate your future manufacturing flows.

Here you can see the project flow at STAMM Blechtechnik.



TRUMPF automation: **The planning** –
report (part 1) via STAMM
Blechtechnik: www.trumpf.info/unhy5b





3. Implementation

We take on all the project management tasks for you. Your dedicated contact accompanies you from the analysis to the final inspection.



4. Support

Whether you want to continuously improve your processes or expand your automation, you can depend on us – now and in future.



TRUMPF automation: **The development** –
report (part 2) via STAMM
Blechtechnik: www.trumpf.info/a7xos6

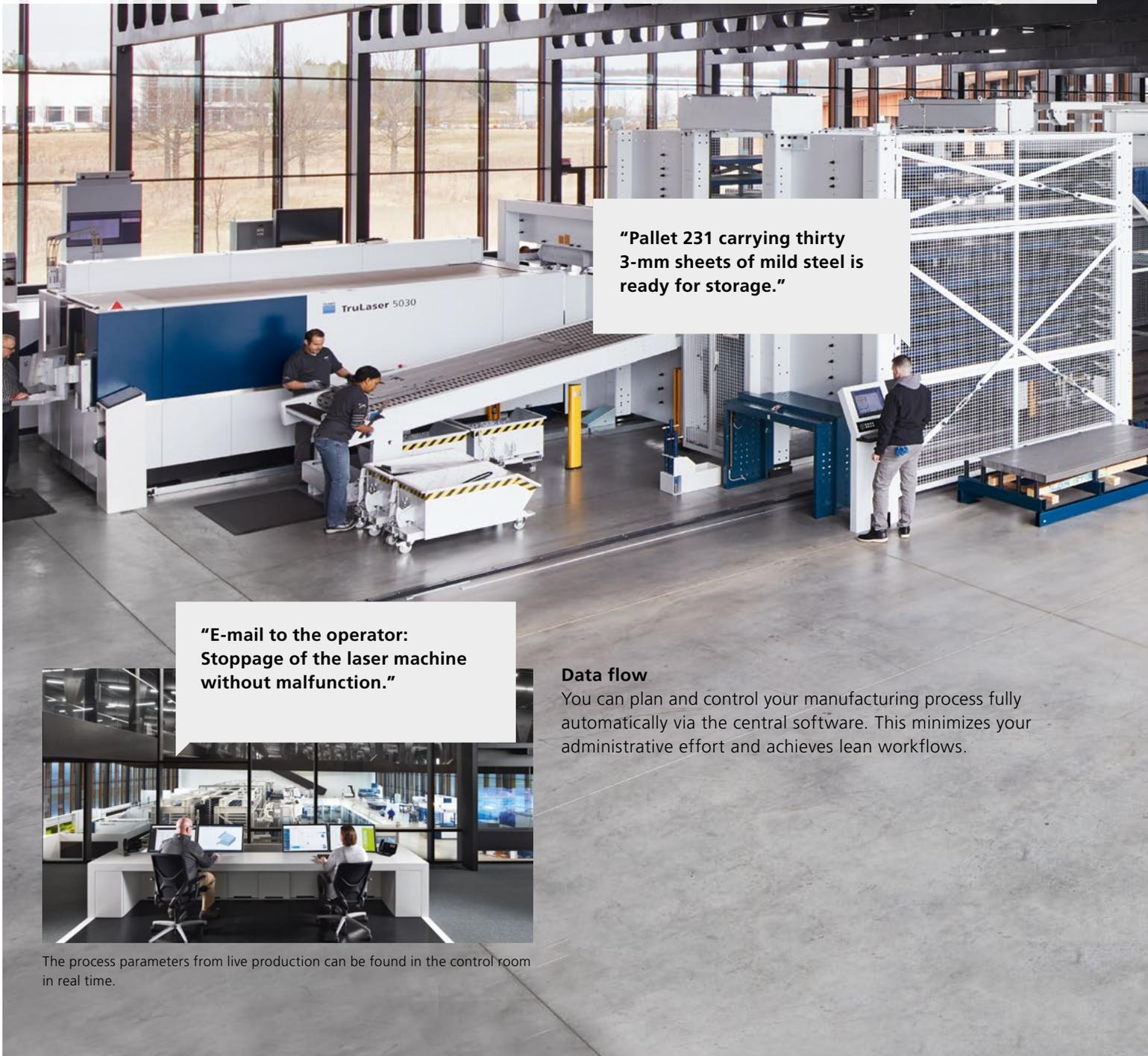


TRUMPF automation: **The result** –
report (part 3) via STAMM
Blechtechnik: www.trumpf.info/jurczg



Smooth-flowing production

TRUMPF Chicago's Technology Center, opened in 2017, is a prime, practical example of how people, machines, automation functions, and software can all work together in perfect harmony. Furthermore, the machines communicate with each other and exchange information. This is made possible by automating the material flow and machine functions, as well as by linking processes using intelligent software.



"Pallet 231 carrying thirty 3-mm sheets of mild steel is ready for storage."

"E-mail to the operator: Stoppage of the laser machine without malfunction."

Data flow

You can plan and control your manufacturing process fully automatically via the central software. This minimizes your administrative effort and achieves lean workflows.

The process parameters from live production can be found in the control room in real time.

"The light barrier has been interrupted."

"For order 465, 78 units have been produced."

"Order 132 is completed."

Material flow

Automated material handling makes your machines more productive. An integrated storage system provides for an efficient material flow, thus saving space, time, and money.



Take a stroll over the skywalk to see just how the individual production systems integrate to form one entire system.



Discover how networked production actually works in practice. On location in Chicago, or in video: www.trumpf.info/wgqxvo

Smart Material Flow – intralogistic solutions for streamlined processes with reduced non-productive times

Up to 40% of resources are still being allocated to non-value-adding activities. There is a better way: Optimize your shop floor with a transparent material flow. The foundation for this are unambiguous postings and digital mapping of your production. Discover modular solutions for a most efficient factory flow.

truConnect
Your smart factory

TRULAMP CENTER 1000



Reduce throughput times and part costs

You plan and control the production process systematically thanks to digital mapping of your production.

Modular solutions pave the way for you

Suitable modules simplify your daily intralogistics tasks.

Great potential even for small production units

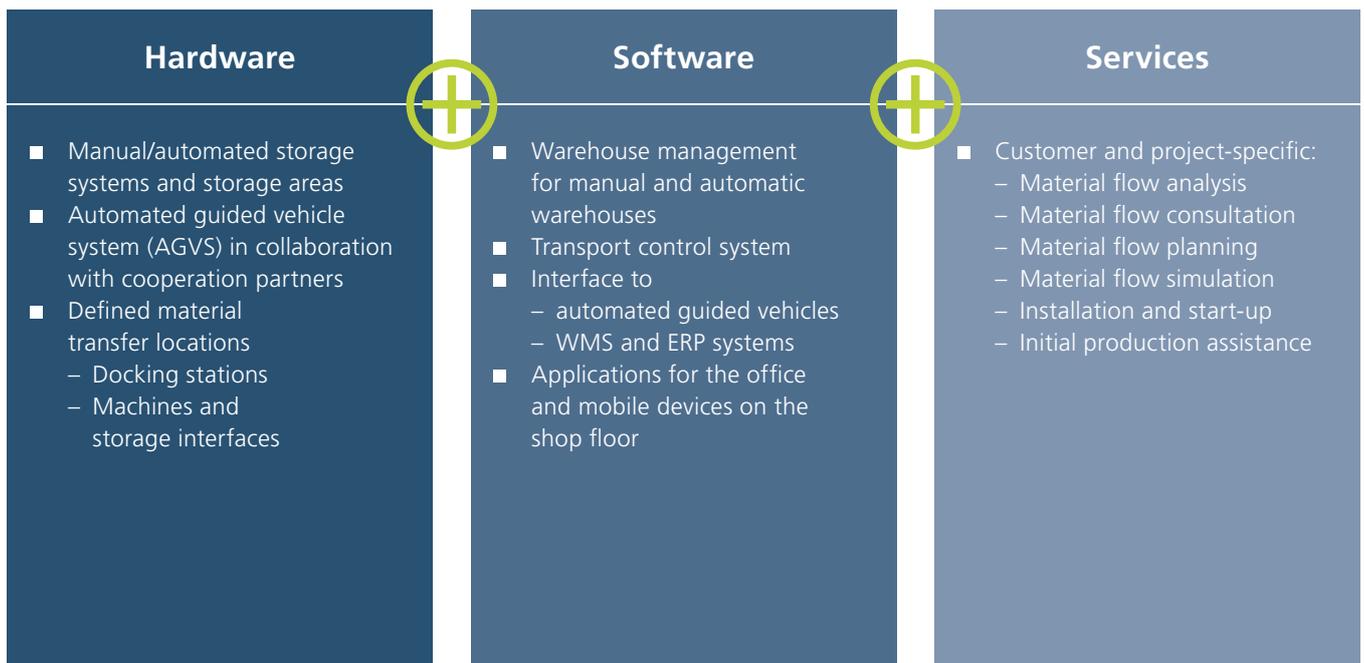
You streamline your production with an efficient material flow – without a complex infrastructure.

Increased sales thanks to digitalized material flow

Transparency and improved processes harmonize all resources within the material flow.

Increased sales thanks to a digitalized material flow

Transparency and an improved intralogistics increase your utilization overall. All machines, processes, sequences and personnel play a role in this. Coordinate it all with solutions from TRUMPF.



www.trumpf.info/wgqxvo

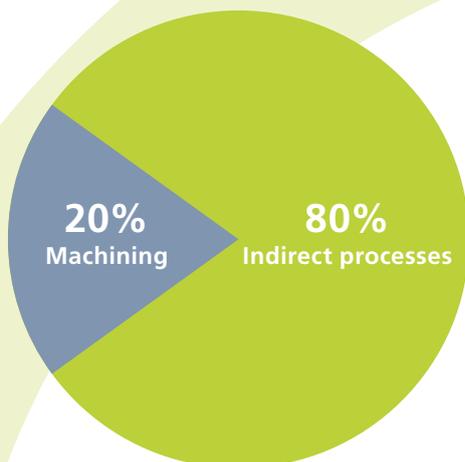


Digitalize the material flow – create added value

To remain competitive in the long term, productivity and efficiency are important metrics of your shop floor. Unplanned additional effort interrupts the production flow and diminishes overall utilization. As a result, part costs soar and make it difficult for you to calculate reliably.

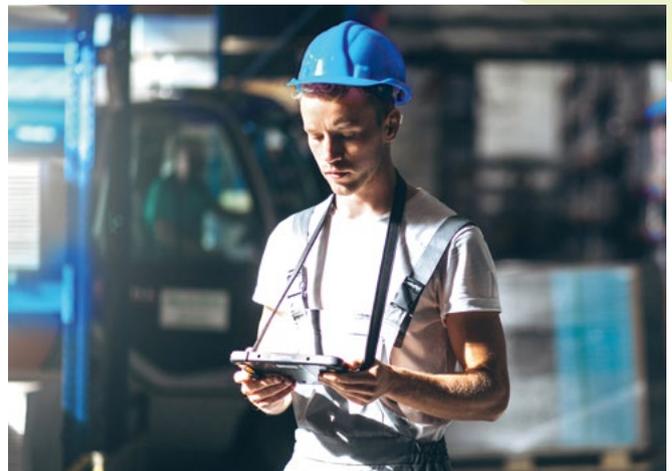
Increase of overall utilization, reduction of production costs

A digitalized material flow provides clarity in your factory flow. The basis: simple and unambiguous postings combined with clearly defined storage locations. Apps and connected hardware minimize your work. This means that order and material flows are synchronized. The system adapts the transport sequence automatically when you change the production plan.



Relieve workers, reduce non-productive times

Tracking material movement digitally saves time and releases resources. You can use these resources directly for value-adding activities. Your intralogistics will become even more efficient with our modular system comprising hardware and software: transport material and goods throughout your entire sheet metal process chain as autonomously as possible, from storage to delivery.



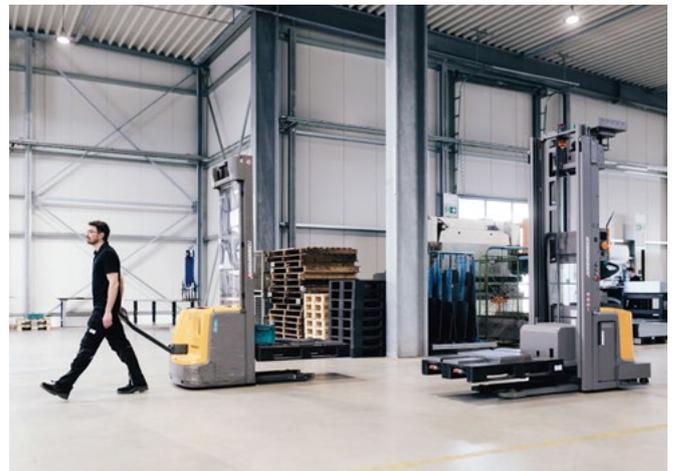
Control transport efficiently

You load machines coupled with a large-scale storage system fully automatically. But what do you do if there is no physical automation or direct storage connection? In these cases, you use a docking station and the Oseon transport guide system. As a central hub, the docking station registers the material movement automatically when parking or removing a pallet. Oseon either informs personnel on your shop floor when which order should be picked up, placed in intermediate storage or brought to the next workstation, or it transfers this information directly to an automated guided vehicle.



Minimize the time and effort involved in postings

The real-time information concerning orders and material on the shop floor form the basis for an efficient production. TRUMPF systems automatically report this data, depending on the model and variant. Individual workstations – even external machines and manual operations – can be integrated in an intelligent material flow concept with Oseon and docking stations.



Smart Factory Consulting – let us advise you!

We will accompany you on your path into the connected future. What potential does networking have for you? What does your path to networked production look like? Regardless of whether you want to just make a start, make step-by-step adaptations or fully network, our consultants will help find the ideal solution for any situation.

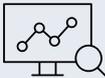
TRUMPF software

How do you keep the overview of all process steps and maintain a smooth production flow? How do you program more orders in a shorter space of time? As machine engineers, we have been developing software for all areas of sheet metal processing for around 50 years – so that you can develop your production’s full potential.

Oseon. Work flows

Produce more profitably with the role-based software for the sheet metal process chain

Are you looking for greater transparency and improved machine availability, not to mention reliable delivery? Then you need processes that are more efficient and that have perfect interplay. With Oseon, you connect production processes, machines and your employees. How? The software combines MES and WMS functionalities, perfectly designed for the sheet metal process chain. And in addition, it provides easy integration of existing systems such as ERP and CAM. Select from Oseon Go, Grow or Flow the ideal packet for your needs and adapt as business grows.

Enhanced productivity	
 Digital order management Flexible entry control and tracking of jobs	 Efficient tool and machine set-up Easy calibration of machines and operating equipment
Reduced search times  Traceability Control of the material flow incl. the buffer stock	Lower stock levels  Seamless stock management Simple and automated stock entry
Higher throughput	
 Optimized order flow Transparent availability of the workplaces	 Just-in-time intralogistics Optimally guided intralogistics, reduced throughput times
Reduced downtime  Optimal workplace control Mobile worker assistance	Process optimization  Efficient analysis Reliable database due to automatic feedback



www.trumpf.info/q2nv7s



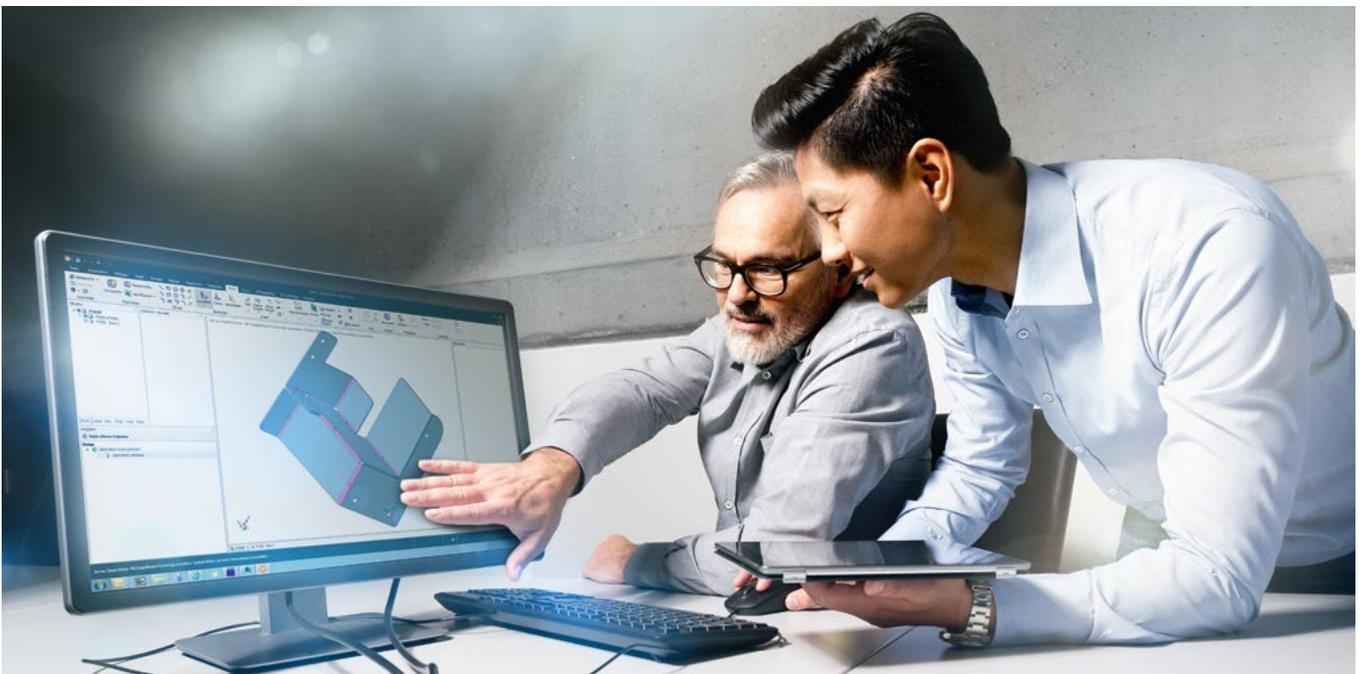
Quick and easy programming with integrated technical knowledge

Time is money, even for programmers. Faced with many small and often complex orders, your programming has to be significantly quicker – as well as error-free. Software that is coordinated with your system helps you to optimally nest your parts, for example, thereby reducing your material costs. Thanks to integrated technology expertise for the world of sheet metal, you gain time with the programming software from TRUMPF – for new orders.

How you benefit: More profitable production

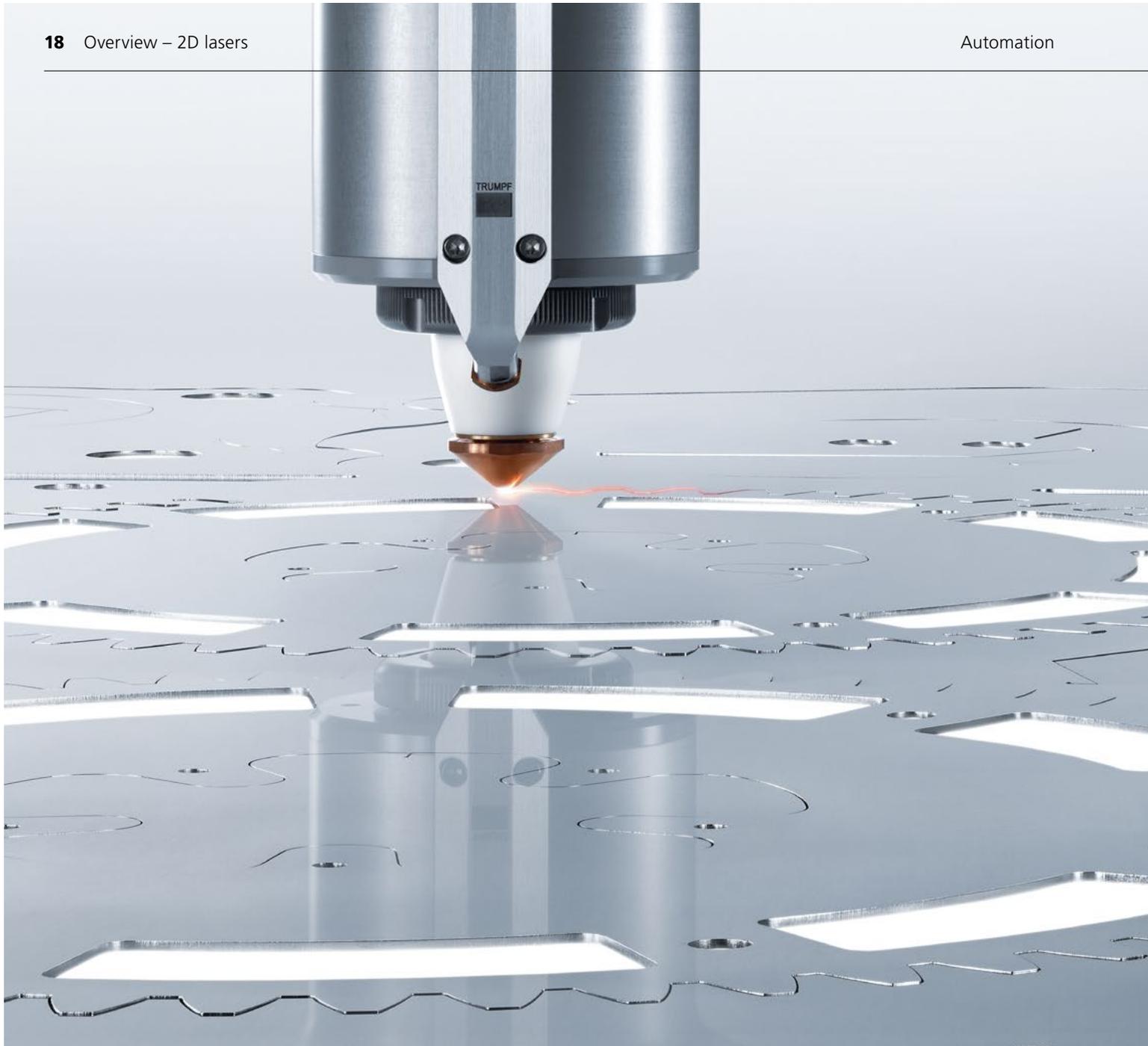
Improve your performance with a click

Be it bending, punching or laser cutting, just one piece of software can cover the CAD editing and programming of your TRUMPF machines: TruTops Boost. The all-in-one solution enables you to cover multiple process steps and work through them consistently. All of the steps in a job are included, from the 2D/3D part to the finished NC program for bending, punching punch laser and laser machines. At the same time, the software takes into account the dependencies between the cutting and bending technologies as well as the design and ensures a fast production process – a consistent solution ensuring that software and machine are perfectly coordinated.



Software consultation

Faster error-free programming is the objective – which software will get you there? And how does it fit in with your existing systems? The software experts from TRUMPF take their time and answer your questions, keeping their eyes on your very individual requirements.



“Thanks to the modular and adjustable construction, customers are provided with the right solution for nearly every layout and manufacturing philosophy.”

Norbert Gruhl, Head of Development Customizing, Neukirch

Automated lasers make a convincing impression

A wide range of modular automation components is available for your TruLaser cutting machines. This means you receive a solution that is precisely tailored to your needs, ranging from semi-automatic loading right up to a fully automated machine with storage connection.

LOADING

LoadMaster _____ **20**
Simple loading

LOADING + UNLOADING

LiftMaster Linear Basic _____ **28**
The lean portal solution

LOADING + UNLOADING + AUXILIARY PALLET OPERATION

LiftMaster|LiftMaster Sort _____ **22**
Flexible loading, unloading and sorting

SORTING

SortMaster _____ **32**
Fully automated sorting of small and large items

LOADING + UNLOADING + SORTING

LiftMaster Compact _____ **24**
Our best-in-class

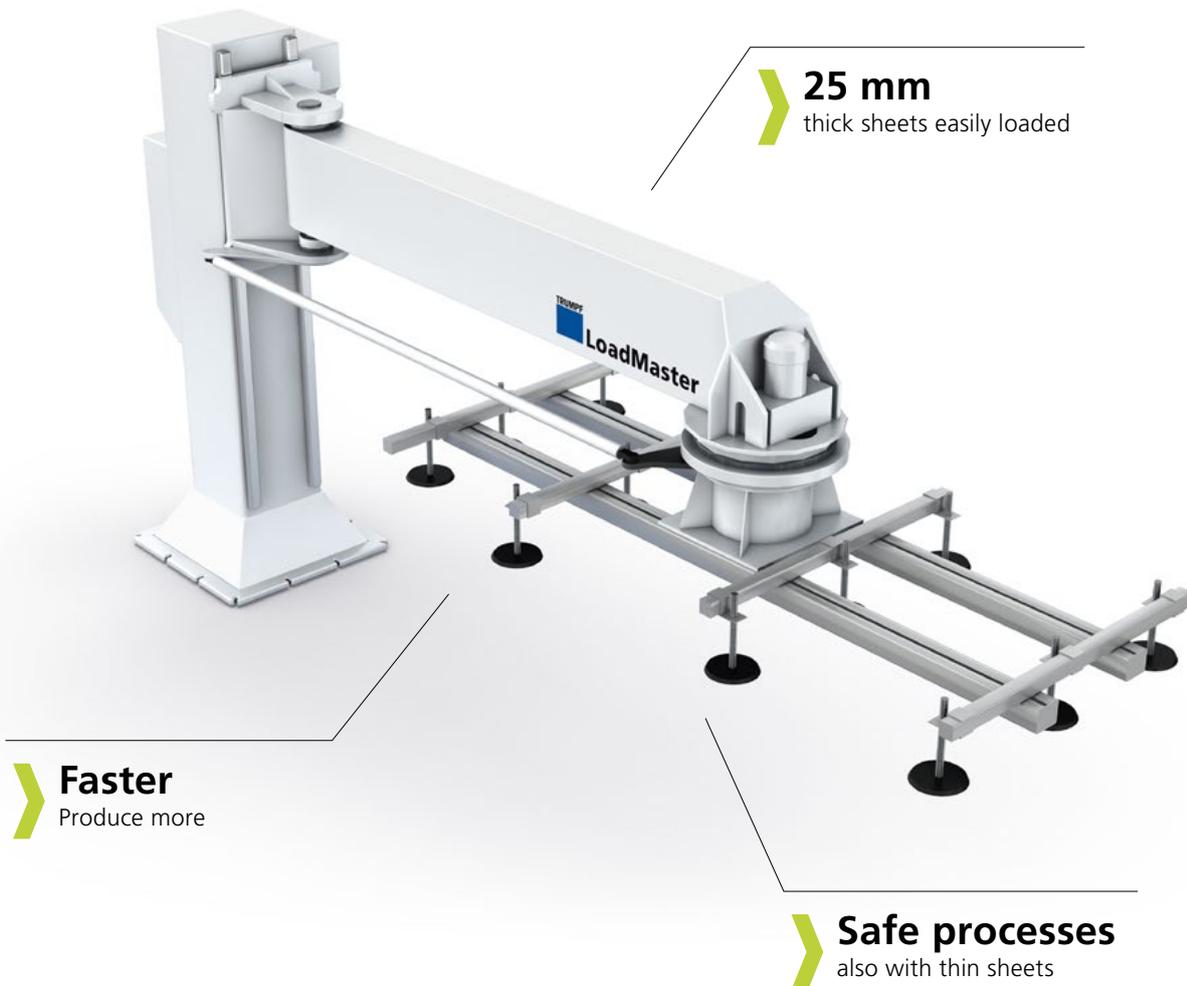
LiftMaster Linear _____ **26**
The universal portal solution

LiftMaster Store _____ **30**
The fastest connection to storage

LiftMaster Store Linear _____ **30**
The fastest connection to storage with multi-machine connection

Simple loading

LoadMaster



The LoadMaster universal loading unit automatically supplies your machine with raw sheets. Vacuum suction cups move the sheets from the loading station to the pallet changer and put them down there.

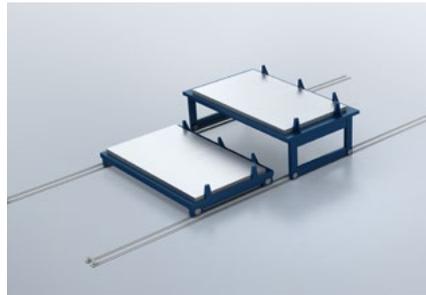
With the LoadMaster, you utilize your machine's capacity better and thus produce more at a reduced cost. Reliable processes are the key to this – for every sheet thickness. The peeler suction cup and fanning magnets provide additional help to ensure the process runs smoothly.

“With the LoadMaster, novices and advanced users alike benefit from an inexpensive and user-friendly material handling solution.”

Mathis Schmidt, Development – TruLaser Automation



Reliable processes for separating metal sheets increase productivity and reduce rejects.



Simply linking the machine to the material storage unit speeds up the material supply.



LoadMaster loading a TruLaser 3030.



Experience the **LoadMaster** in action: www.trumpf.info/5pbko4



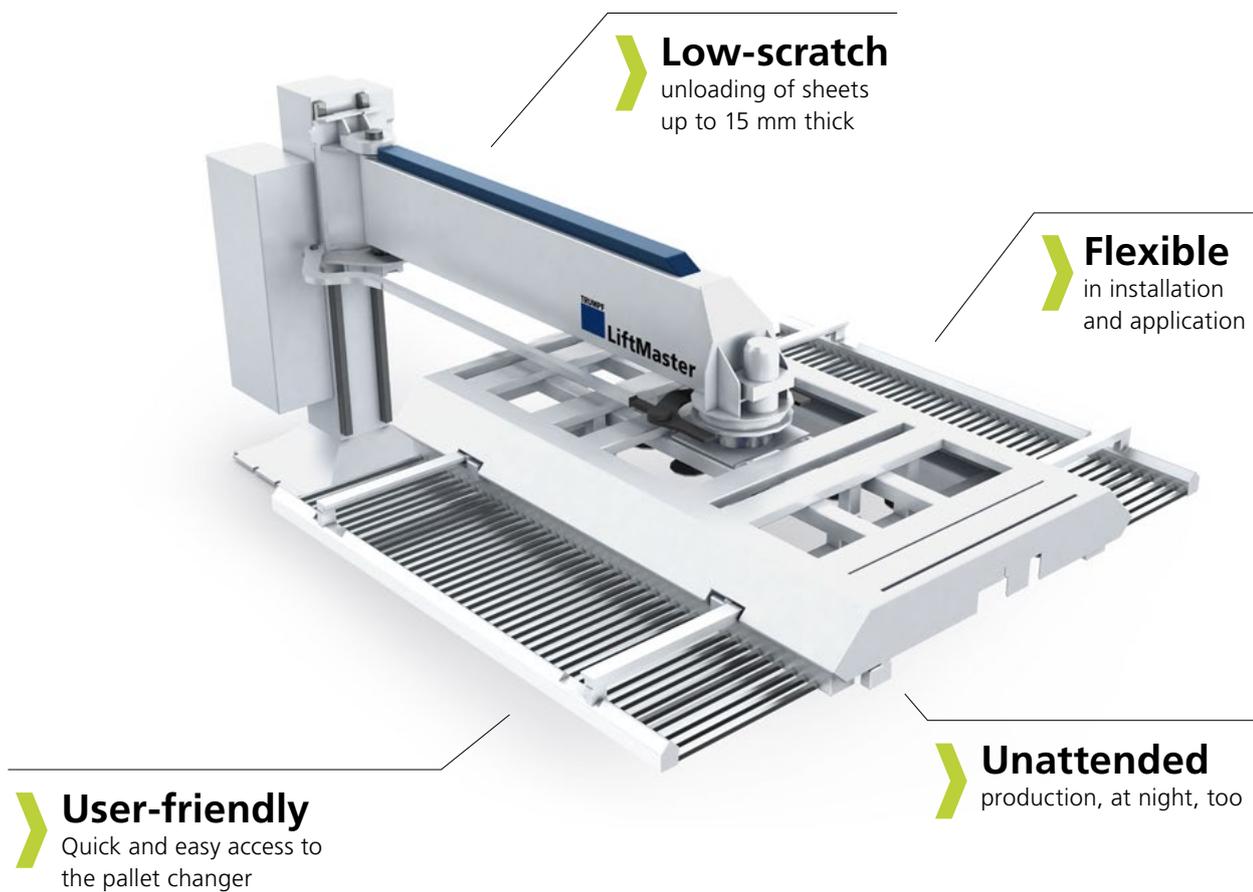
Technische Daten					
LoadMaster		Large format	Maximum format	Oversize format	
		1530	2040	2060	2560
For TruLaser machine(s)		1030 fiber	1040 fiber	1060 fiber	8000
		3030 3030 fiber	3040 3040 fiber	3060 3060 fiber	
		5030 5030 fiber	5040 5040 fiber	5060	
Max. sheet format	mm x mm	3000 x 1500	4000 x 2000	6000 x 2000	6000 x 2500
Min. sheet format	mm x mm	1000 x 1000	1000 x 1000	1000 x 1000	1000 x 1000
Max. sheet thickness	mm	25	25	25	20
Max. sheet weight	kg	900	1600	2400	2400
Typical equipment					
Loading station		■	■	■	■
Stripping equipment	R	□	□	□	□
Cart systems	R	□	□	□	□
Connection to storage	R	□	□	□	□

■ Standard □ Optional R Retrofit possible

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Flexible loading, unloading and sorting

LiftMaster and LiftMaster Sort

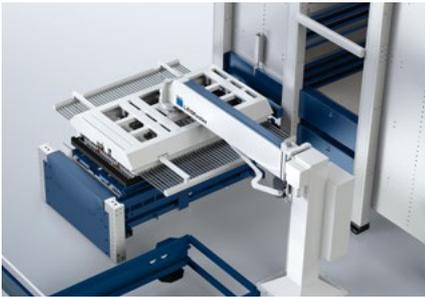


Thanks to various installation possibilities, the LiftMaster flexibly covers a wide range of automation functions, from loading and unloading to pallet handling and part removal.

The swivel arm of the LiftMaster automatically adapts to the conditions on site. Consequently, you can flexibly manufacture and increase your productivity in the usual environment. With the proven TRUMPF suction frame plus unloading rake, you gain a reliable and, upon request, low-scratch system for parts handling.

“Only with a highly automated sheet metal manufacturing chain we can counter the cheap competition in terms of costs.”

Johann Hochstöger, Fröling Heizkessel- und Behälterbau Ges. m.b.H.



You can easily load and unload auxiliary pallets with the LiftMaster.



The LiftMaster loading and unloading a TruLaser 3030.



The LiftMaster indirectly connects a TruLaser 3030 to a TruStore 3030.

Technical data			
LiftMaster		Large format	Maximum format
		1530	2040
For TruLaser machine(s)		1030 fiber 3030 3030 fiber	1040 fiber 3040 3040 fiber
		5030 5030 fiber	5040 5040 fiber
Max. sheet format	mm x mm	3000 x 1500	4000 x 2000
Min. sheet format for loading unloading	mm x mm	1000 x 1000 150 x 150	1000 x 1000 150 x 150
Max. sheet thickness for loading unloading unloading belt prongs unloading auxiliary pallets	mm	25 25 15 25	25 20 15 25
Max. sheet weight for loading unloading	kg	900 900	1600 1260
Typical equipment (LiftMaster LiftMaster Sort)			
Suction frame rake		■	■
Stripping equipment		■	■
SortMaster	R	□	□
Thin sheet separation	R	□	□
Part separation		□	□
Belt prongs, for sheet thickness of up to 15 mm	R	□	□
Cart systems	R	□	□
Auxiliary pallet operation	R	□	□
Connection to storage	R	□	□

■ Standard □ Optional R Retrofit possible – Not available

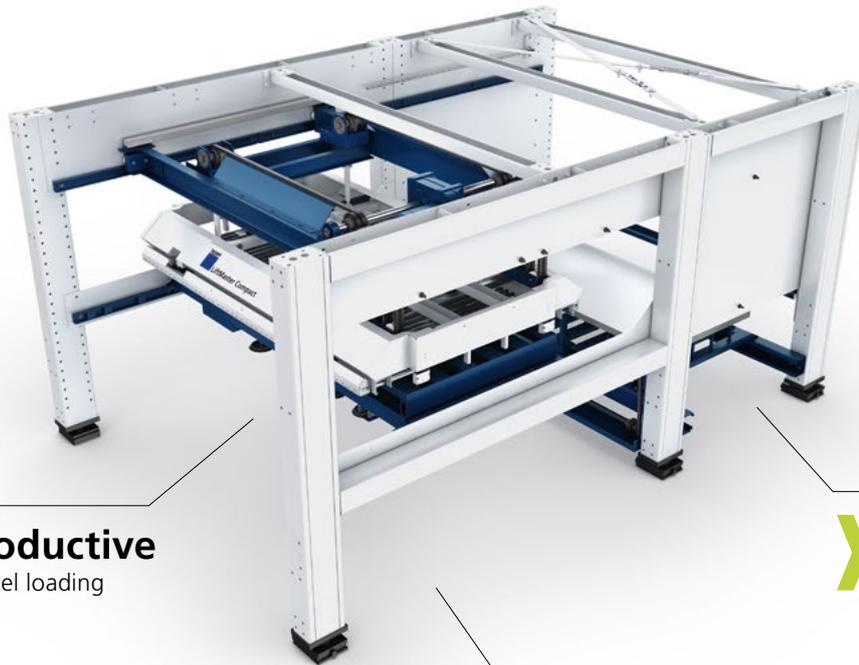
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Our best-in-class

LiftMaster Compact

< 90 seconds
for a complete loading and unloading cycle, incl. pallet change

Remove parts ergonomically
thanks to the PartMaster



More productive
thanks to parallel loading and unloading

Expandable
to include the manufacturing cell with TruStore and PartMaster

Flexible
Linear design allows for numerous installation and material flow possibilities

When you choose the LiftMaster Compact, you are choosing the fastest and most compact loading and unloading unit in the TRUMPF laser portfolio. While the suction plate unloads metal sheets onto the pallet changer, the rake frame loads blanks onto the synchronous loader. This saves time, money and space. You can easily integrate this unit directly into the TruStore or you can equip it with the manual PartMaster sorting station.

As a dynamic and variable solution, the LiftMaster Compact is especially attractive when sheet runtimes are short – whether the presence or absence of a storage connection. There are numerous options available through which the LiftMaster Compact can perfectly fit in your production environment and material flow.

“We need to make production more effective and more profitable. The key is to keep manufacturing lean and that was why we elected to automate the new TruLaser 3030.”

Harald Keller, Keller Blechtechnik GmbH



At the heart of the LiftMaster Compact is the synchronous loader, which loads and unloads in parallel.



Full flexibility with a PartMaster integrated with a TruStore 3030.



LiftMaster Compact in linear design allows for scrap skeleton separation for automatic part separation.



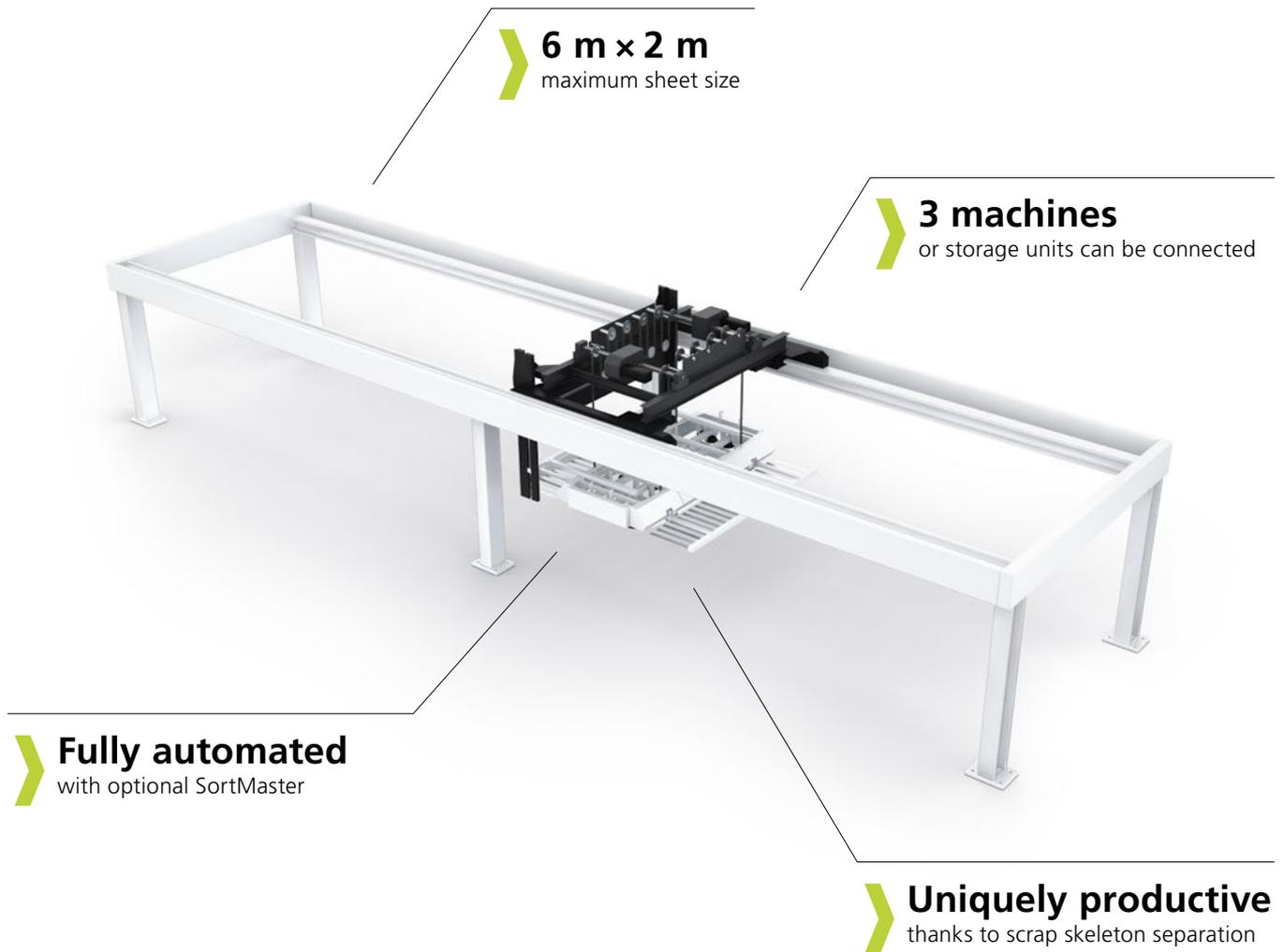
The addition of supplementary portal stations results in greater flexibility in the material flow.

Technical data			
LiftMaster Compact		Large format	Maximum format
		1530	2040
For TruLaser machine(s)		1030 fiber 3030 3030 fiber	1040 fiber 3040 3040 fiber
		5030 5030 fiber	5040 5040 fiber
Max. sheet format	mm x mm	3000 x 1500	4000 x 2000
Min. sheet format for loading unloading	mm x mm	1000 x 1000 150 x 150	1000 x 1000 150 x 150
Max. sheet thickness for loading unloading unloading belt prongs	mm	25 25 15	-
Max. sheet weight for loading unloading	kg	900 900	1600 1260
Max. loading weight of the finished part pallets	kg	3000	5000
Max. loading stack height – standalone TruStore large-scale storage system	mm	300 170 130	300 90 130
Max. unloading stack height – standalone TruStore large-scale storage system	mm	250 170 200	250 170 200
Typical equipment			
Synchronous loader		■	■
Rake		■	■
Thin sheet separation	R	□	□
Linear design		□	□
Belt prongs, for sheet thickness of up to 15 mm	R	□	□
PartMaster, for sheet thickness of up to 12 mm	R	□	□
Scrap skeleton separation up to 6 mm		□ ⁽¹⁾	-
TruStore integration	R	□	□
Cart systems	R	□	□
2-way raw material station		□	-
Connection to storage	R	□	□

■ Standard □ Optional N Retrofit possible ⁽¹⁾ Only in combination with the linear design
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The universal portal solution

LiftMaster Linear

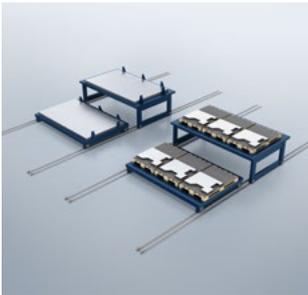


Using its linear axis, the LiftMaster Linear loads and unloads up to three machines at a maximum of six stations. At the stations, you can selectively integrate cart systems, machines, loading stations or unloading platforms.

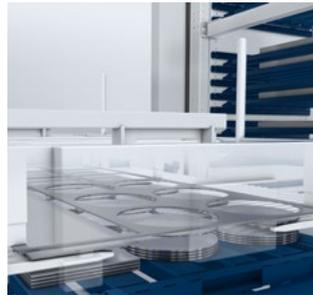
The versatile LiftMaster Linear can easily handle nearly any application. The sort extension(s) or scrap skeleton extension(s) separate the good parts from the scrap skeleton. Adding in the SortMaster gives you a fully automated, reliable, and stable processing cell in which the good parts can even be placed with the appropriate orientation for the follow-up process.

“The first standard portal solution with which customers can load and unload sheets measuring 6 m × 2 m.”

Norbert Gruhl, Head of Development Customizing, Neukirch



Simple connection of the machine to a raw material storage area for faster material supply.



More productive, thanks to skeleton separation; performed in one stroke and in less than one minute per sheet.



The TruLaser 5060 with a LiftMaster Linear and double cart.



A multi-machine connection with three TruLaser 5060 and a LiftMaster Linear.

Technical data				
LiftMaster Linear		Large format	Maximum format	Oversize format
		1530	2040	2060 2560
For TruLaser machine(s)		1030 fiber 3030 3030 fiber	3040 3040 fiber	1060 fiber 3060
		5030 5030 fiber	5040 5040 fiber	5060
Max. sheet format	mm × mm	3000 × 1500	4000 × 2000	6000 × 2000 6000 × 2500
Min. sheet format for loading unloading	mm × mm	1000 × 1000 150 × 150	1000 × 1000 150 × 150	1000 × 1000 150 × 150
Max. sheet thickness for loading unloading unloading belt prongs unloading aux. pallets	mm	30 30 15 25	25 20 15 25	25 20 – –
Max. sheet weight for loading unloading	kg	900 900	1600 1260	2300 2300
Typical equipment				
Mild steel rake for thick sheet metal handling		■	□	–
Suction frame rake		■	■	■
Stripping equipment		■	■	■
SortMaster	R	□	□	–
Thin sheet separation	R	□	□	□
Part separation		□	□	–
Additional suction frame		□	□	–
Skeleton separation, for sheet thickness of up to 6 mm		□	–	–
Belt prongs, for sheet thickness of up to 15 mm	R	□	□	–
Auxiliary pallet operation	R	□	□	–
Cart systems	R	□	□	□
Multi-machine connection		□	□	□
Connection to storage	R	□	□	□

■ Standard □ Optional R Retrofit possible – Not available

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The lean portal solution

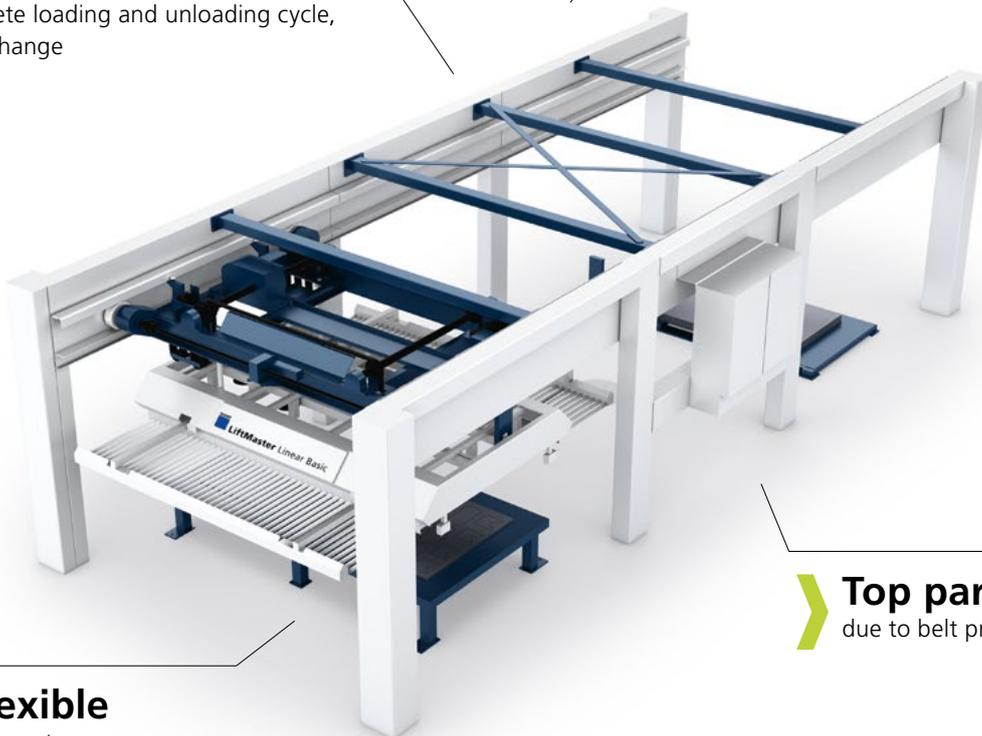
LiftMaster Linear Basic

200 seconds
for a complete loading and unloading cycle,
incl. pallet change

2 machines
for higher productivity

Flexible
in layout

Top parts quality
due to belt prongs

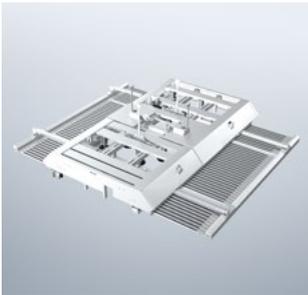


Simple, compact, reliable: The LiftMaster Linear Basic is a lean solution for the loading and unloading of sheets – one that offers optimum value for the money. Compared to the LiftMaster, it has a 15% smaller footprint. Cart systems enable an indirect connection to a storage system.

You can simultaneously connect multiple machines to your LiftMaster Linear Basic. This way you boost the utilization from one to two machines at a maximum of four stations. In doing so you integrate cart systems, loading stations and deposit platforms just as flexibly and universally as with the LiftMaster Linear.

“Despite its high level of automation flexibility, the LiftMaster Linear Basic offers an attractive price-performance ratio, especially in combination with the material buffer.”

Patrick Bauer, Business Development Smart Factory Solutions



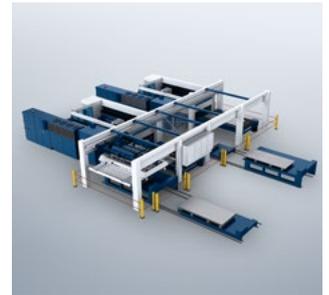
Reliable loading with the TRUMPF suction frame.



Higher parts quality due to low-scratch unloading with belt prongs.



The LiftMaster Linear Basic on a TruLaser 3030.



A multi-machine connection with a LiftMaster Linear Basic.



Experience the **LiftMaster Linear Basic** in action:
www.trumpf.info/cn6b1h



Technical data		
LiftMaster Linear Basic		Large format
		1530
For TruLaser machine(s)		1030 fiber 3030 3030 fiber
		5030 5030 fiber
Max. sheet format	mm x mm	3000 x 1500
Min. sheet format for loading unloading	mm x mm	1000 x 1000 150 x 150
Min. sheet format for unloading	mm x mm	150 x 150
Max. sheet thickness for loading unloading unloading belt prongs	mm	25 25 15
Max. sheet weight for loading unloading	kg	900 900
Typical equipment		
Suction frame rake		■
Stripping equipment		■
Thin sheet separation	R	□
Belt prongs, for sheet thickness of up to 15 mm	R	□
Cart systems	R	□
Multi-machine connection		□
Connection to storage	R	□
Material buffer		□
Additional gantry station		□

■ Standard □ Optional R Retrofit possible

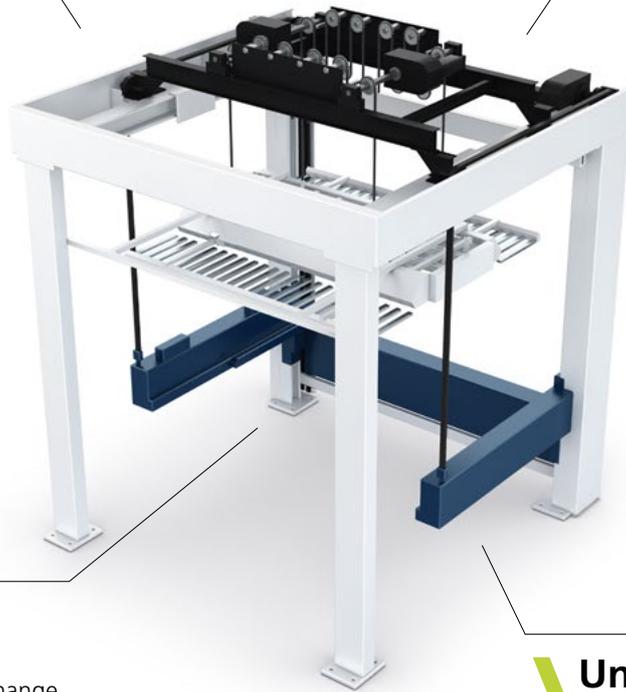
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The fastest connection to storage with multi-machine connection

LiftMaster Store and LiftMaster Store Linear

More productive
thanks to direct storage access

Expandable
to include the processing cell with TruStore and SortMaster

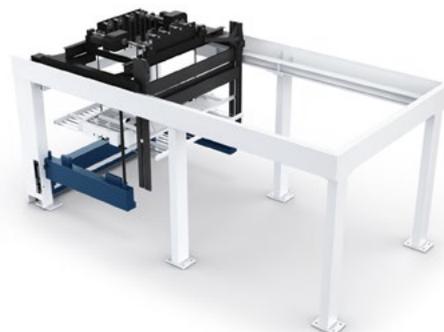


100 seconds
for a complete loading and unloading cycle, incl. pallet change, with the synchronous loader

Unbeatable
thanks to scrap skeleton separation

As a portal solution directly connected to a storage system, the LiftMaster Store needs very little space and opens up a lot of leeway in how you design your production.

The LiftMaster Store derives its top performance from a variety of proven TRUMPF technologies. These include the suction frame with rake for reliable loading and unloading, as well as the synchronous loader to increase productivity. With its independent pallet lift, the LiftMaster Store is able to quickly access pallets in the storage system. These include the suction frame with a rake for reliable loading and unloading, as well as the synchronous loader for increasing productivity.



With multiple stations, the LiftMaster Store Linear can be connected to up to three machines.

“In order to greatly reduce access times to storage, the LiftMaster Store is connected directly to the storage system and customers can opt for the synchronous loader.”

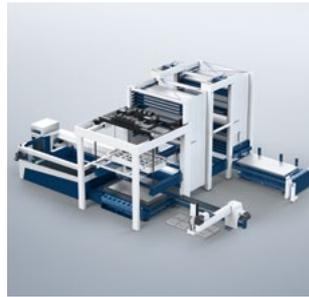
Mathis Schmidt, Development – TruLaser Automation



More productive, thanks to skeleton separation; performed in one stroke and in less than one minute per sheet.



The synchronous loader loads and unloads in parallel, thus increasing productivity.



The LiftMaster Store connects a TruLaser 5030 directly to a TruStore 3030 and SortMaster.



A multi-machine connection with a LiftMaster Store Linear and TruStore 3030.



Experience the **LiftMaster Store** in action:
www.trumpf.info/a0tcmn



Technical data

LiftMaster Store LiftMaster Store Linear		Large format	Maximum format
		1530	2040
For TruLaser machine(s)		1030 fiber 3030 3030 fiber	1040 fiber 3040 3040 fiber
		5030 5030 fiber	5040 5040 fiber
Max. sheet format	mm x mm	3000 x 1500	4000 x 2000
Min. sheet format for loading unloading	mm x mm	1000 x 1000 150 x 150	1000 x 1000 150 x 150
Max. sheet thickness for loading unloading unloading belt prongs	mm	30 30 15	25 20 15
Max. sheet weight for loading unloading	kg	900 900	1600 1260

Typical equipment (LiftMaster Store|LiftMaster Store Linear)

Mild steel rake for thick sheet metal handling		■ ■	□ □
Suction frame rake peeling equipment		■ ■	■ ■
SortMaster	R	□ □	□ □
Thin sheet separation	R	□ □	□ □
Part separation	R	□ □	□ □
Additional suction frame		□ □	□ □
Skeleton separation, for sheet thickness of up to 6 mm		□ □	- -
Synchronous loader		□ □	- -
Belt prongs, for sheet thickness of up to 15 mm	R	□ □	□ □
Auxiliary pallet operation	R	□ □	□ □
Multi-machine connection		- □	- □
Integration TruStore STOPA	R	□ □	□ □

■ Standard □ Optional R Retrofit possible – Not available

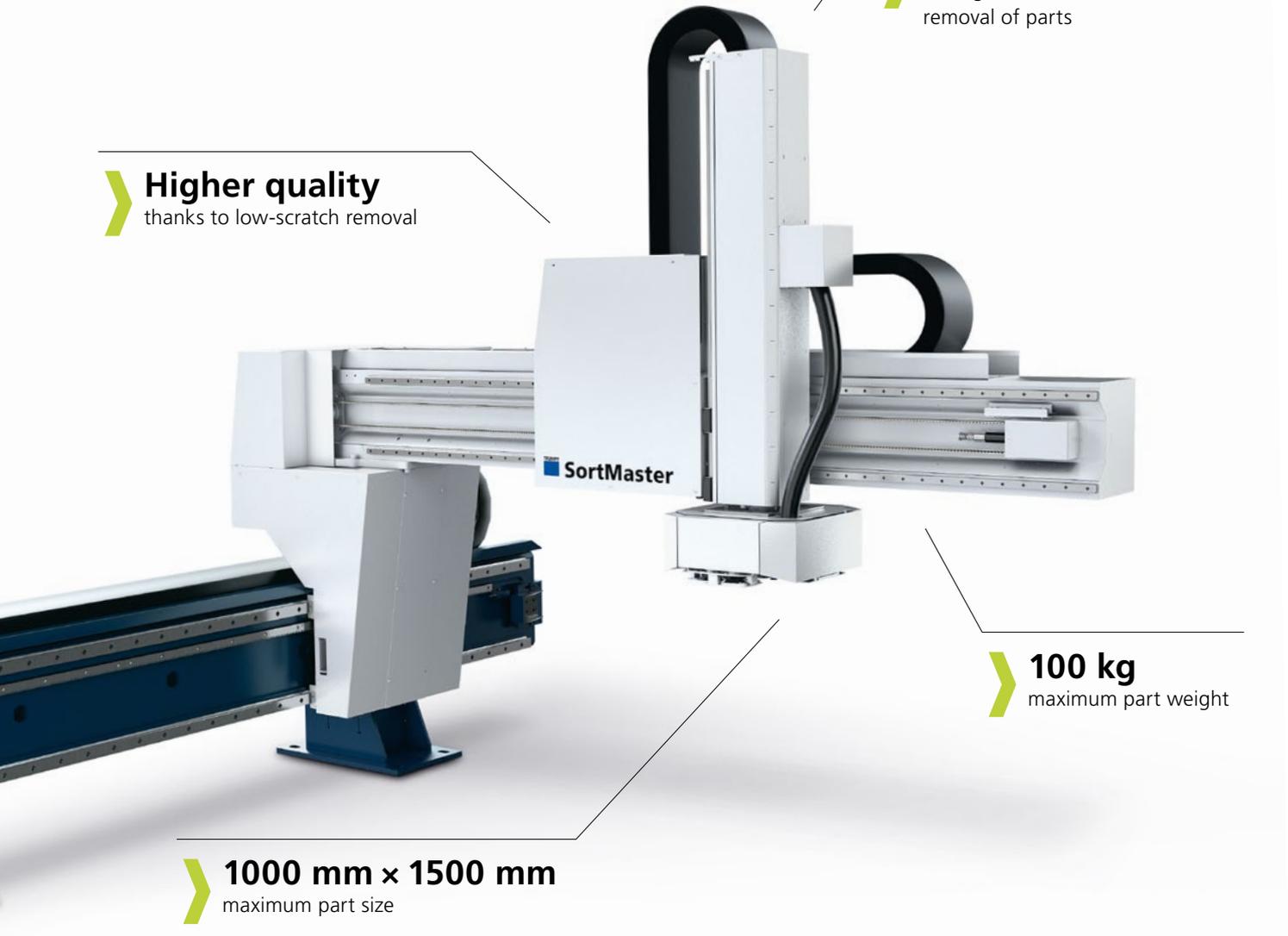
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Fully automated sorting of small and large items

SortMaster

More productive
through the automatic
removal of parts

Higher quality
thanks to low-scratch removal



100 kg
maximum part weight

1000 mm × 1500 mm
maximum part size

The SortMaster removes, sorts and stacks finished cut parts. With the SortMaster, you can also operate your laser machine fully automatically by connecting it to a storage system using a LiftMaster. This means you can manufacture your products reliably – even around the clock if you prefer.

Smart functions resolve potential disruptions independently. For example, through the automatic separation check: If a part does not fall, the gripper head separates it by shaking the scrap skeleton.

“Today we have achieved the optimum degree of automation. Now we are able to manufacture many parts ourselves, parts we would otherwise have to outsource.”

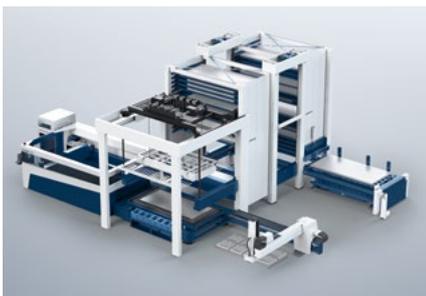
Daniel Peltier, HEIN Backöfen & Kältetechnik



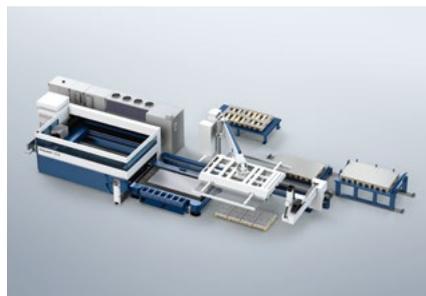
Smart functions: Monitoring of part separation and more effective separation of good parts from the scrap skeleton thanks to vibrating gripper head.



The additional gripper removes parts up to 1000 x 1500 mm and can be easily connected by means of a gripper coupling.



The TruLaser 5030 with SortMaster, connected directly to a TruStore 3030 by means of a LiftMaster Store.



The TruLaser 3030 with a LiftMaster Sort, SortMaster and cart systems.



Experience the **SortMaster** in action:
www.trumpf.info/4do5eh



Technical data			
SortMaster		Large format	Maximum format
		1530	2040
For TruLaser machine(s)		3030 3030 fiber	3040 3040 fiber
		5030 5030 fiber	5040 5040 fiber
Max. parts weight	kg	100	100
Min. max. part size	mm	30 x 80 1000 x 1500	30 x 80 1000 x 1500
Typical equipment			
Gripper head		■	■
Magnetic suction gripper		■	■
Spreadable suction cup slats		■	■
Gripper coupling		■	■
Cleaning brushes		■	■
Cart systems	R	□	□
Connection to storage	R	□	□

■ Standard □ Optional R Retrofit possible

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“We have developed a machine that makes fully automated production possible. This is crucial for the competitiveness of our customers.”

Torsten Popp, Development – TruLaser Tube

Automated laser tube cutting

Your laser tube cutting machine operates automatically – and reliably, around the clock – and thus pays itself off much more quickly. Take advantage of the fully automated material handling offered by the superbly accessible TruLaser Tube machines.

LOADING

LoadMaster Tube _____ **36**
Loading of tubes and profiles

UNLOADING + SORTING

Part removal station _____ **38**
Gentle unloading and sorting

DISPOSAL

Waste conveyor belt _____ **38**
Removal of scrap parallel to production

Loading of tubes and profiles

LoadMaster Tube



Up to **12.5 m**
in tube length

Intelligent
process management

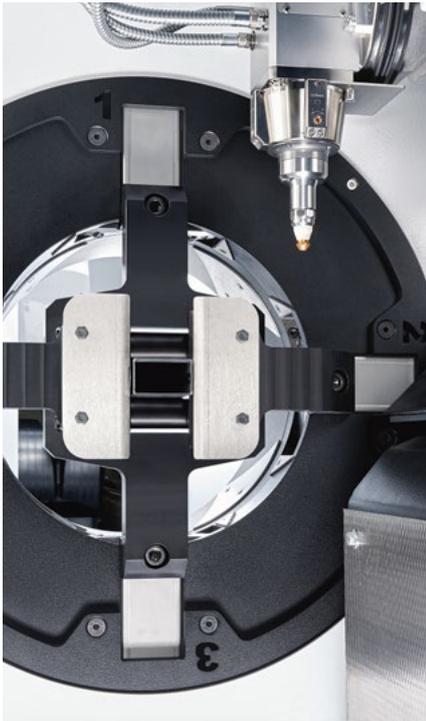
Also flexible with
small batch sizes

With the LoadMaster Tube, you benefit from minimum setup times. The tube magazine has a capacity of up to 9 t of raw material, which the loading unit conveys after a plausibility check.

To do this, the machine software compares the geometry of the tubes with stored data and consequently ensures trouble-free operation. The gripper system transfers the automatically measured tube to the machine. You can load small series quite easily by conveyor path or by hand. Thanks to Smart Profile Detection, you can also process exceptional profiles with high reliability. The innovative procedure detects the angular position and orientation of the tube while loading and automatically positions the clamping device accordingly.

“Our TruLaser Tube 7000 tube magazine has a capacity of 4 metric tons of material; the tubes are automatically checked and loaded. This way we can also produce unattended at night.”

Udo Reichardt, Reichardt Metallverarbeitung



Wide roller jaws precisely guide the workpieces to the cutting head.



Fully automated material handling on the TruLaser Tube 7000: loading, unloading, sorting, and discharging scrap.



The universal loading system LoadMaster provides your machine with sheet metal automatically.



The swivel-mounted conveyor system on the TruLaser Tube 7000 for small batch sizes and special profiles.



Experience the **TruLaser Tube 7000 fiber**, open machine design for optimal access: www.trumpf.com/s/trulaser-tube-7000-fiber



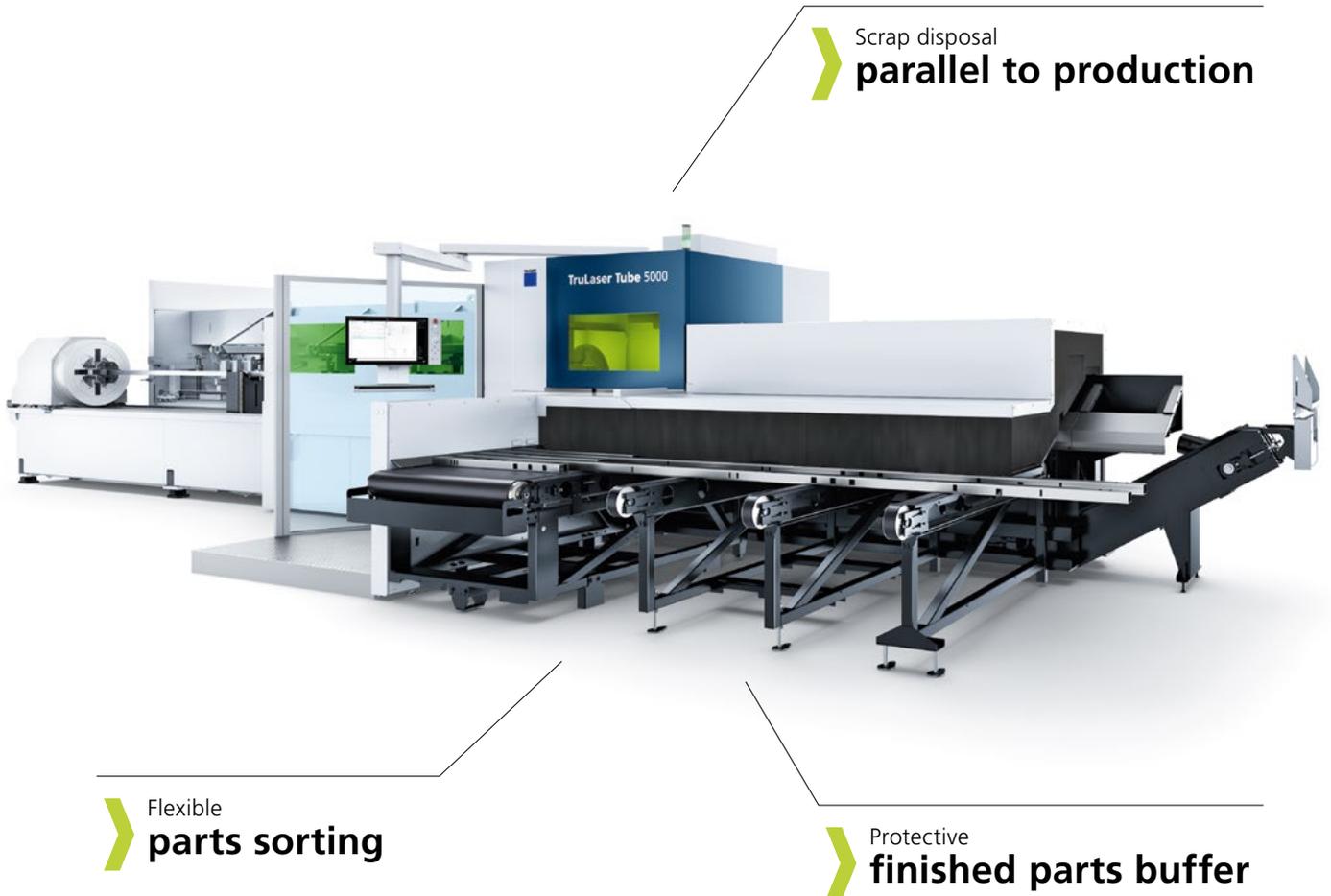
Technical data				
LoadMaster Tube		TruLaser Tube 3000	TruLaser Tube 5000	TruLaser Tube 7000
Max. tube length for automatic loading	mm	8000	6500 8000	6500 9200 12500
Max. outer circle diameter	mm	170	180	254
Max. tube line weight	kg m	18.5	25	40
Max. tube weight	kg	148	200	400
Max. bundle weight	kg	5000	5000	9000
Typical equipment				
Automatic setup		■	■	■
Conveyor system		■	■	□
Low-scratch model	R	□	□	□
Tube diameter 15 mm	R	□	□	■
Front attachment of LoadMaster Tube		-	□	□
Smart profile detection	R	-	□	□

■ Standard □ Optional R Retrofit possible

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Gentle unloading and sorting

Part-removal station and waste conveyor belt



The TruLaser Tube part removal station takes special care when unloading your finished parts on conveyor tables, in wire mesh boxes or in containers.

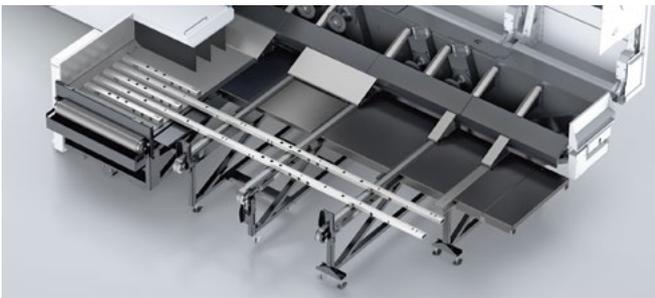
Conveyor tables serve as finished parts buffers; parts can be taken from here at an ergonomic height parallel to production. The flexible part removal station of the TruLaser Tube 7000 also sorts your finished parts. The waste conveyor belt discharges scrap parallel to production.

“We remove cut parts – using either the conveyor table or the part removal station – directly into a wire mesh box. This way, we can configure the storage area for finished parts to match the job.”

Frank Steinhart, H. Steinhart Metallwarenfabrik GmbH & Co. KG



Tube store with a storage connection. Thanks to the new loading automation between the tube storage system and the TruLaser Tube 7000 fiber, loading is now fully automatic and requires no supervision.



Conveyor tables at an ergonomic height make it easier to unload tubes and profiles. They also serve as a practical material buffer.



Experience the **TruLaser Tube 5000 fiber**, the productive all-round machine: www.trumpf.com/s/trulaser-tube-5000-fiber



Technical data

Part removal station		TruLaser Tube 3000	TruLaser Tube 5000	TruLaser Tube 7000
Max. finished part length at part removal station	mm	8000	3000 6500	4500 6500
Max. finished part length at part removal station with optional finished length + 1.5 m	mm	–	4500 8000	6000 8000
Max. outer circle diameter	mm	170	180	254

Typical equipment

Automatic setup		■	■	■
Small parts slide		■	■	■
Parts separated and parts fallen sensor		– ■	■	■
Numerically controlled (NC) sorting possibility		–	–	■
Finished part length + 1.5 m	R	–	□	□
Conveyor table	R	–	■	■
Scrap conveyor belt		–	■	■

■ Standard □ Optional R Retrofit possible – Not available

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“To enable customers to maximize their productivity with TRUMPF punching or punch laser machines, we adapt our automation to the respective performance class.”

Marcus Busch, Head of Development – TruPunch| TruMatic Automation

Automated punching provides strength

For your punch laser or punching machine, you can select from a full range of ideally matched automation solutions. Benefit from the turnkey concepts provided by a full-range supplier – including machinery, automation, programming and production control technology.

LOADING + UNLOADING

SheetMaster Compact _____ **42**

A space-saving entry-level solution for loading and unloading of raw material, and unloading of microjoint sheets

Cart systems _____ **46**

Customized extension of the SheetMaster

LOADING + UNLOADING + SORTING

SheetMaster _____ **46**

Loading of raw materials, as well as the unloading and sorting of finished parts

SORTING

SortMaster Compact _____ **44**

SortMaster Compact sorts and loads finished parts onto the pallet

SortMaster Pallet _____ **46**

Place finished parts sorted on pallets

SortMaster Box _____ **48**

Unloading and sorting of finished parts

SortMaster Box Linear _____ **48**

Unloading and sorting of finished parts in linearly movable containers

DISPOSAL

GripMaster _____ **50**

Unloading of the scrap skeleton

ShearMaster _____ **50**

Cutting up of the scrap skeleton

DisposeMaster _____ **50**

Sorting of scrap

TOOL HANDLING

ToolMaster|ToolMaster Linear and integrated tool changer _____ **52**

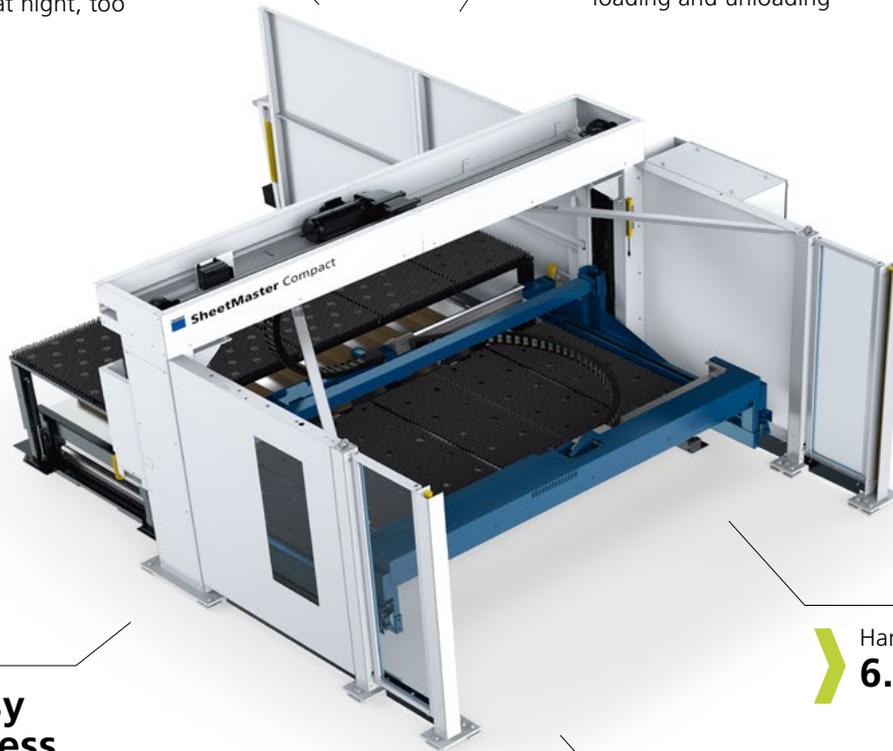
Flexible tool systems

A space-saving, entry-level solution for loading and unloading

SheetMaster Compact

Unattended
production, at night, too

More productive
through unattended
loading and unloading



Easy access

Handles sheets up to
6.4 mm thick reliably

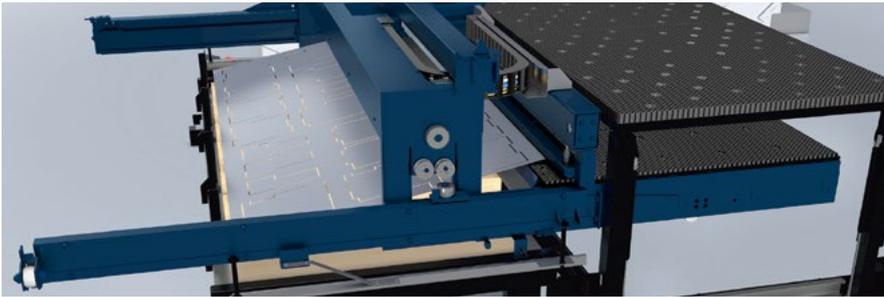
Loading and unloading
parallel to production

The space-saving SheetMaster Compact is your gateway to automated punching. It loads your TruPunch 1000, TruMatic 1000 fiber, TruPunch 3000 or TruMatic 3000 fiber with sheets or pre-cut parts and unloads microjoint sheets and scrap skeletons. Consequently, your system works much more productively without taking up much more space.

The synchronous unloading during production, means you can change material without interrupting the machine production cycle. Thus improving productivity even more.

“The new punching machine is quicker than our old machine and, in combination with the SheetMaster Compact, it increases the output even further.”

Phil Taylor, PKD Precision Sheet Metal Ltd.



Deposit microjoint sheets or scrap skeleton



Carefully prepared loading before unloading saves time.



SheetMaster Compact on a TruMatic 1000 fiber.



Experience the
SheetMaster Compact
in action:
[www.trumpf.info/
mk19eo](http://www.trumpf.info/mk19eo)



Technical data					
SheetMaster Compact		Medium format	Large format	Medium format	Large format
For TruPunch and TruMatic machine(s)		TruPunch 1000 TruPunch 3000		TruMatic 1000 fiber TruMatic 3000 fiber	
Max. sheet format	mm × mm	2500 × 1250	3000 × 1500	2500 × 1250	3000 × 1500
Min. sheet size	mm × mm	1000 × 1000	1000 × 1000	1000 × 1000	1000 × 1000
Sheet thickness loading unlaoding	mm	6.4	6.4	6.4	6.4
Max. sheet weight loading unloading	kg	160	230	160	230
Typical equipment					
Peeler suction cup		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Double sheet detection		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Additional suction cup package	R	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compact – double swing doors		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Compact – light barrier with loading and unloading parallel to production		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

■ Standard □ Optional R Retrofit possible – Not available

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Unloading and sorting

SortMaster Compact

High part quality

Suction cup technology and coordinated parts handling prevent scratches

Sorted onto the pallet

The parts are directly ready for further processing

Barely any space requirements

The automation is integrated into the machine

Reliably unloads parts

The suction cups can be controlled individually – an advantage especially for small parts.

The SortMaster Compact unloads your punching machine or punch laser machine in an automated and reliable manner. It needs very little space for this. Compact suction cups grip nearly every part, thereby ensuring a short removal time. The SortMaster Compact sorts and stacks finished parts on standard charge carriers.

The SortMaster Compact for the TruPunch 1000 and TruMatic 1000 fiber is small and barely needs any space outside of the machine. It is therefore also ideally suited as an entry-level solution to automation. Individually controllable suction cups grip and unload nearly every part. The SortMaster Compact sorts and stacks finished parts onto pallets. Depending on axis combination, the pallet will either be partially or completely loaded. This enables direct onward transport to downstream processes.

“It was never so easy to start with automated removal of single parts, as it is with the SortMaster Compact.”

Steffen Wagner, Product manager, TRUMPF



TruPunch 1000, SortMaster Compact and SheetMaster Compact.



TruMatic 1000 fiber, SortMaster Compact and SheetMaster Compact.



Experience the **SortMaster Compact** in action: www.trumpf.info/ig8xlc



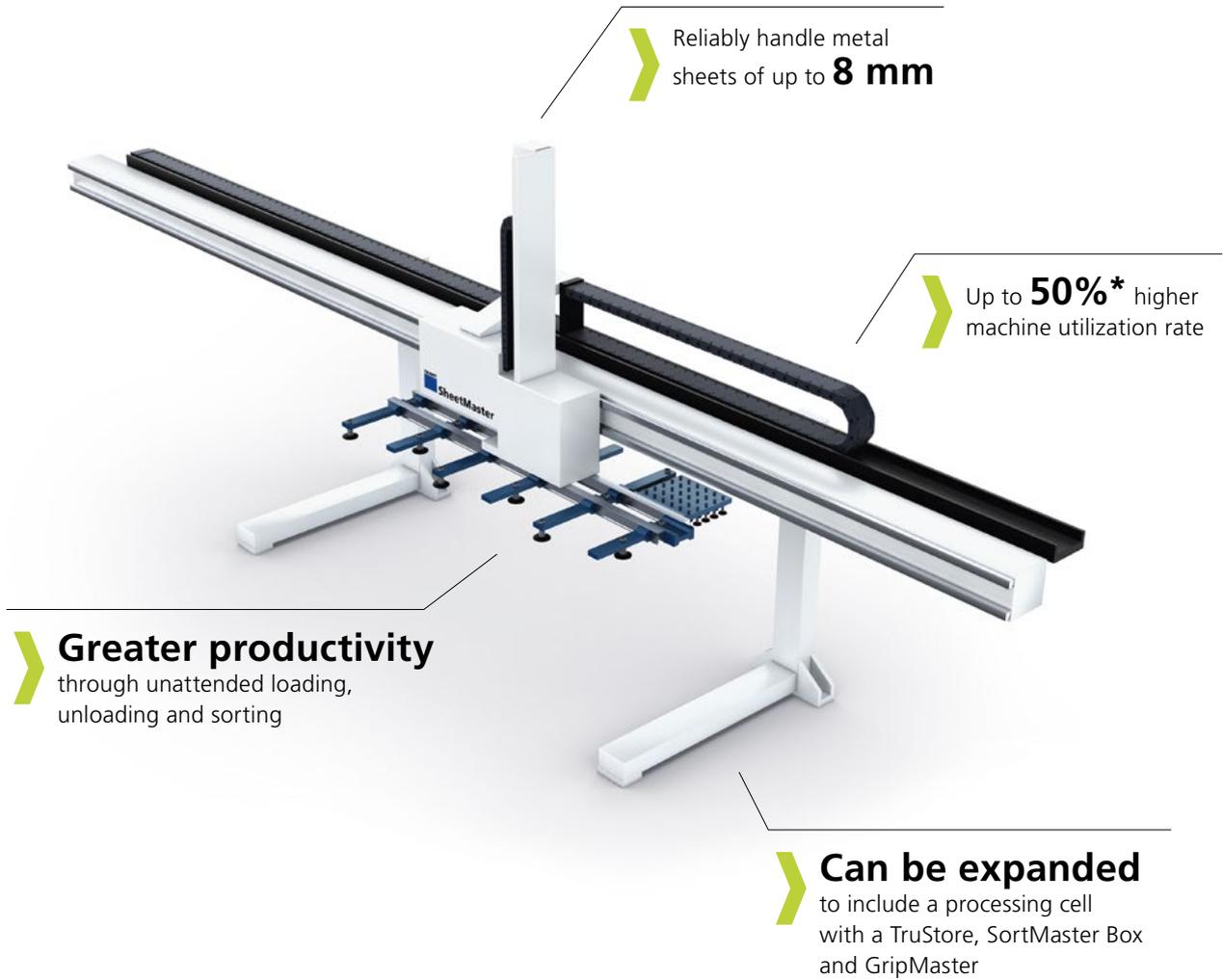
Technical data			
SortMaster Compact			
For TruPunch and TruMatic machine(s)		TruPunch 1000 TruPunch 3000 TruMatic 1000 fiber TruMatic 3000 fiber	
Min. part size (punching parts)	mm x mm	140 x 120	
Min. part size (laser parts)	mm x mm	70 x 30	
Max. part size	mm x mm	600 x 400	
Max. stack height	mm	250	
Typical equipment			
X-axis extension enables the entire europallet to be filled independently			■

■ Standard □ Optional R Retrofit possible – Not available

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Loading of raw materials, as well as the unloading and sorting of finished parts

SheetMaster, SortMaster Pallet and cart systems



Reliably handle metal sheets of up to **8 mm**

Up to **50%*** higher machine utilization rate

Greater productivity through unattended loading, unloading and sorting

Can be expanded to include a processing cell with a TruStore, SortMaster Box and GripMaster

The SheetMaster loads and unloads your punching or combination machine and reliably sorts parts. Suction cups take up sheets or pre-cut sheets from the loading station and transport them to the machine table. The SheetMaster loads and unloads your punching or punch laser machine and sorts parts reliably. By using a wide range of suction units, you can process with an enormous variety of applications depending on the machine type.

Adding a SortMaster Pallet significantly increases your unloading capacity. Alternatively, you can use cart systems on rails or with belt drives to load and unload more parts. Using carts also makes it possible to connect your machine to compact and large storage systems.

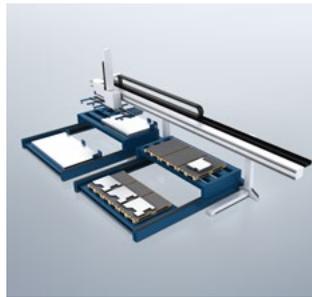
* Two shifts during the day, with an additional unattended shift at night.

“Based on our need for three-shift operations and weekend work, and to prepare for the future, we had to purchase a highly productive, automated system.”

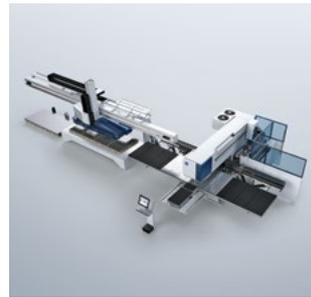
Michael Kohlmann, Regiolux GmbH



The SortMaster Pallet: sort ergonomically, unload more.



A cart system with belt drive for loading and unloading.



The TruPunch 5000, automated with a SheetMaster and ToolMaster Linear.



TruMatic 7000 on the TruStore 3030 with SheetMaster, double cart on rails, SortMaster Pallet, SortMaster Box and GripMaster.

Technical data

SheetMaster		TruPunch 3000		TruPunch 5000			TruMatic 6000 TruMatic 6000 fiber		TruMatic 7000		
		Medium format	Large format	Medium format	Large format	Over size format	Medium format	Large format	Medium format	Large format	Over size format
		3025	3030	5025	5030	5040	6125	6130	7125	7130	7140
Max. sheet format for loading	mm x mm	2500 x 1250	3000 x 1500	2500 x 1250	3000 x 1500	4000 x 1500	2500 x 1250	3000 x 1500	2500 x 1250	3000 x 1500	4000 x 1500
Max. sheet format for loading	mm x mm	600 x 350	600 x 350	600 x 370	600 x 370	600 x 370	600 x 350	600 x 350	600 x 600	600 x 600	600 x 600
Min. part size for unloading	mm x mm	95 x 30	95 x 30	170 x 170	170 x 170	170 x 170	150 x 180 (punch) 110 x 30 (laser)		160 x 160	160 x 160	160 x 160
Sheet thicknesses	mm	0.8–6.4	0.8–6.4	0.8–8.0	0.8–8.0	0.8–8.0	0.8–8.0	0.8–8.0	0.8–8.0	0.8–8.0	0.8–8.0
Max. sheet weight	kg	160	230	200	285	285	160	230	285	285	285

Typical equipment

Loading station		■	■	■	■	■	■ ■	■ ■	■	■	■
Unloading platform		■	■	■	■	■	■ ■	■ -	■	■	■
Suction modules/plate/slats		□	□	□	■	□	■ ■	■ ■	■	■	■
Sorting axis		-	-	-	-	-	- -	- -	■	■	■
Loading unloading parallel to production	R	□	□	□	□	□	□ ■	□ ■	□	□	□
Loading table	R	-	-	□	□	-	-	-	-	-	-
Cart systems	R	□	□	□	□	□	□ □	□ ■	□	□	□
SortMaster Pallet	R	□	□	□	□	□	□ □	□ □	□	□	□
Connection to storage	R	□	□	□	□	□	□ □	□ □	□	□	□

■ Standard □ Optional R Retrofit possible - Not available

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Unloading and sorting of finished parts

SortMaster Box and SortMaster Box Linear

Four types of parts
can be separated easily and flexibly

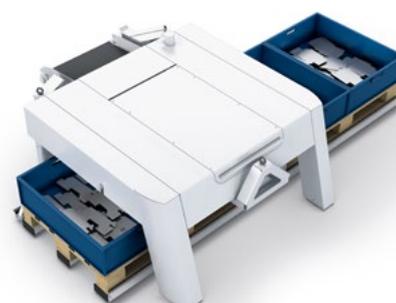


100% easy
to integrate
into intralogistics

More productive
thanks to the removal and sorting
of parts parallel to production

Small parts that fall through the punching or laser flap are automatically sorted by the SortMaster Box or SortMaster Box Linear into four boxes. The parts must not be larger than 500 × 500 mm. Because the unattended sorting takes place during the manufacturing process, the entire system becomes more productive.

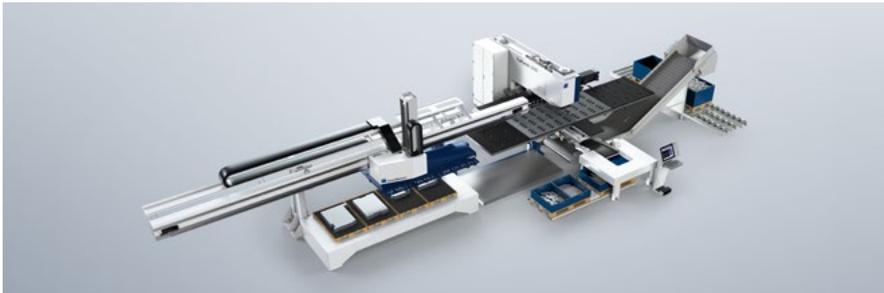
With the SortMaster Box, the containers are arranged in a carousel; with the SortMaster Box Linear, small parts fall into boxes that move along a line. Thanks to an additional conveyor belt and another part removal flap, the linear solution is particularly scratch-free. In both versions, the containers can be directly removed with a pallet jack. Simply select the version that best suits your hall layout.



The SortMaster Box Linear: simple, particularly low-scratch sorting into linearly movable containers.

“SortMaster Box makes the rapid removal of parts even easier and more reliable because it eliminates manual sorting.”

Marcus Busch, Head of Development – TruPunch|TruMatic Automation



The TruPunch 3000 with a SheetMaster and integrated tool changer, SortMaster Box Linear and DisposeMaster.



The TruPunch 5000 with a SheetMaster, SortMaster Box, GripMaster and ToolMaster Linear.

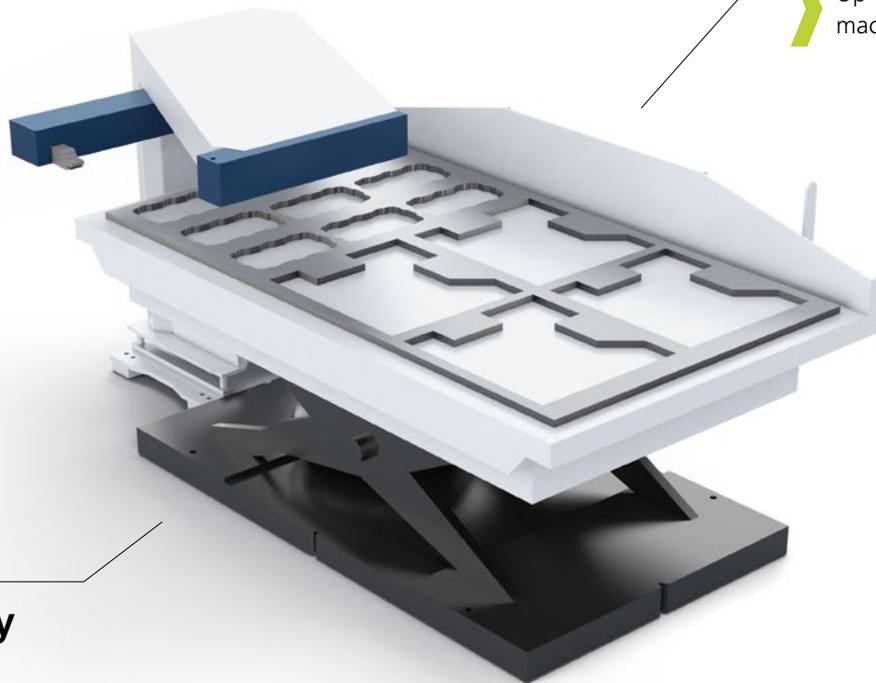
Technical data			
		SortMaster Box	SortMaster Box Linear
For TruPunch machine(s)		5000 ^[1]	3000
			5000
For TruMatic machine(s)		6000 6000 fiber (no oversize format)	–
		7000	
Max. part size (TruMatic 3000 fiber)	mm × mm	500 × 500 (300 × 500) ^[2]	500 × 500 (300 × 500) ^[2]
Max. number of boxes		4	4

^[1]Not with skeleton-free punching. ^[2]Only medium format.

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Easy disposal of scrap skeletons and scrap

GripMaster, ShearMaster and DisposeMaster



Up to **50%*** higher machine utilization rate

100% easy
to integrate

Safer as a result of the unattended removal and stacking of scrap skeletons

It removes and stacks them automatically on a scissor table with a scrap skeleton pallet.

GripMaster lets you get a grip on scrap skeletons and remainder strips. It automatically takes them out and stacks them on a scissor table with scrap skeleton pallet. The ShearMaster makes it easier to dispose of scrap. It draws the scrap skeleton from the machine onto its conveyor table and cuts the material into manageable strips using a shearing unit. Whatever is left over from the skeleton-free punching is disposed of by the DisposeMaster. It sorts the cut up scrap skeleton and slugs according to material type.

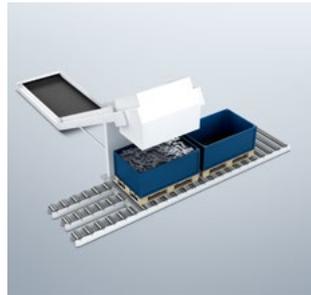
*Two shifts during the day, with an additional unattended night shift in combination with the SheetMaster.

“Because the customer alone can judge the value of scrap, TRUMPF offers solutions for scrap skeletons as well as for cut-up scrap.”

Tino Fröde, Development – TruPunch|TruMatic Automation



Cut up the scrap skeleton with the ShearMaster.



Separate up to three types of scrap with the DisposeMaster.



The TruPunch 3000 with a SheetMaster, SortMaster Box Linear and DisposeMaster.



The TruPunch 5000 with a SheetMaster, SortMaster Box, GripMaster and ToolMaster Linear.

Technical data				
Scrap skeleton scrap handling		DisposeMaster	GripMaster	ShearMaster
For TruPunch machine(s)		3000 ^[1]	5000	5000
		5000 ^[1]		
For TruMatic machine(s)		–	6000 (no oversize format), 6000 fiber (no oversize format)	7000
			7000	
Steel sheet thickness	mm	Depending on machine	Depending on machine	0.5–4
Aluminum sheet thickness	mm			0.5–4
Stainless steel sheet thickness	mm			0.5–2
Max. scrap size (TruMatic 3000 fiber)	mm × mm	500 × 500 (300 × 500) ^[2]	Depending on sheet format	400 × 1000
Max. stack height (TruMatic 3000 fiber)	mm	1000	400 (300) ^[2]	–
Max. carrying capacity of scissor table	kg	–	5000	–
Max. carrying capacity	kg	1000 (container)	2000 (scrap skeleton pallet)	–

^[1] Only with skeleton-free punching. ^[2] Only medium format.

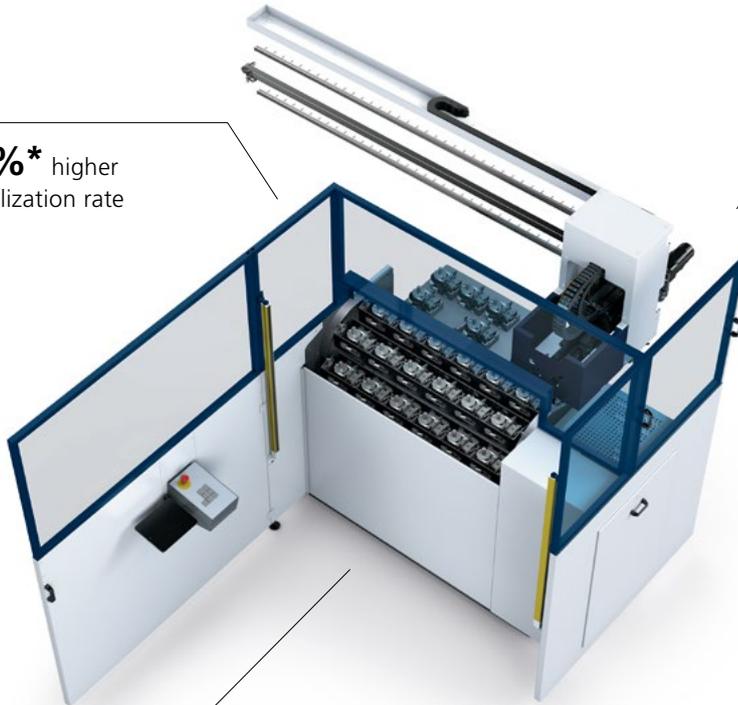
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Flexible tool systems

ToolMaster, ToolMaster Linear and integrated tool changer

Up to **50%*** higher machine utilization rate

Up to **90** tools with the ToolMaster Linear



Manufacture more quickly with automatic tool changes

Pre-setup **parallel to production**

Using the right tool storage unit or changer boosts the productivity of your punching and punch laser machines. The classic ToolMaster has a carousel and puts the tools in position with the swivel arm. You can achieve maximum flexibility with a ToolMaster Linear. Its tool capacity can be gradually increased to 90 tool cartridges.

You no longer need to worry about how to cope with increasing variance and ever more complex parts. Due to the right tool system, you can always have the appropriate tool at hand.

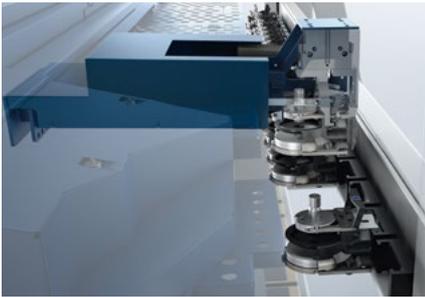


ToolMaster

* Previously two shifts, plus an additional unattended shift using a ToolMaster, ToolMaster Linear and an integrated tool changer.

“With the ToolMaster Linear, for the first time we have developed a system that can also be easily and flexibly retrofitted.”

Thomas Conzelmann, Product Manager – TruPunch|TruMatic



The integrated tool changer on the SheetMaster.



The TruPunch 5000, automated with a SheetMaster and ToolMaster Linear.



TruMatic 7000 on the TruStore 3030 with SheetMaster, double cart on rails, SortMaster Pallet, SortMaster Box and GripMaster.

Technical data					
Tool storage and changing systems		TruPunch 5000	TruMatic 6000	TruMatic 6000 fiber	TruMatic 7000
ToolMaster					
Number of stations		–	40 70	40 70	–
Setup parallel to production		–	□	□	□
Tool changer integrated in SheetMaster					
Number of stations		–	34 ^[1] 40	34 ^[1] 40	–
Setup parallel to production		–	□	■ ^[2]	–
ToolMaster Linear					
Number of stations	R	18 54 90	–	–	18 54 90
Setup parallel to production		– ■ ■	–	–	– ■ ■

■ Standard □ Optional R Retrofit possible – Not available

^[1]With bottom unload double cart. ^[2]Standard equipment for SheetMaster.

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“With a focus on intelligent software and sensor technology, we develop cells that master our customers’ complex bending processes smoothly and with high productivity.”

Bernhard Fischereider, Director Product Management and International Sales Bending

Automated bending provides relief

Automated bending with the TruBend Cell increases your output and allows you to operate more profitably. With the TruBend Cell you can run your production operations in multiple shifts with a minimum of personnel. The consistently high quality of your components cuts down on rework and rejects. Integrated solutions with sophisticated sensors and software, optimized material flows and state-of-the-art gripper technology deliver reliable processes and convincing results. Even by panel bending the automatic loading and unloading ensures faster throughput times.

LOADING + UNLOADING + SORTING

TruBend Cell 5000 _____ **56**

The productive all-purpose bending cell

TruBend Cell 7000 _____ **58**

The innovative high-speed bending cell

TruBend Center 7030 _____ **60**

Full automatic panel bending

TOOL HANDLING

ToolMaster _____ **62**

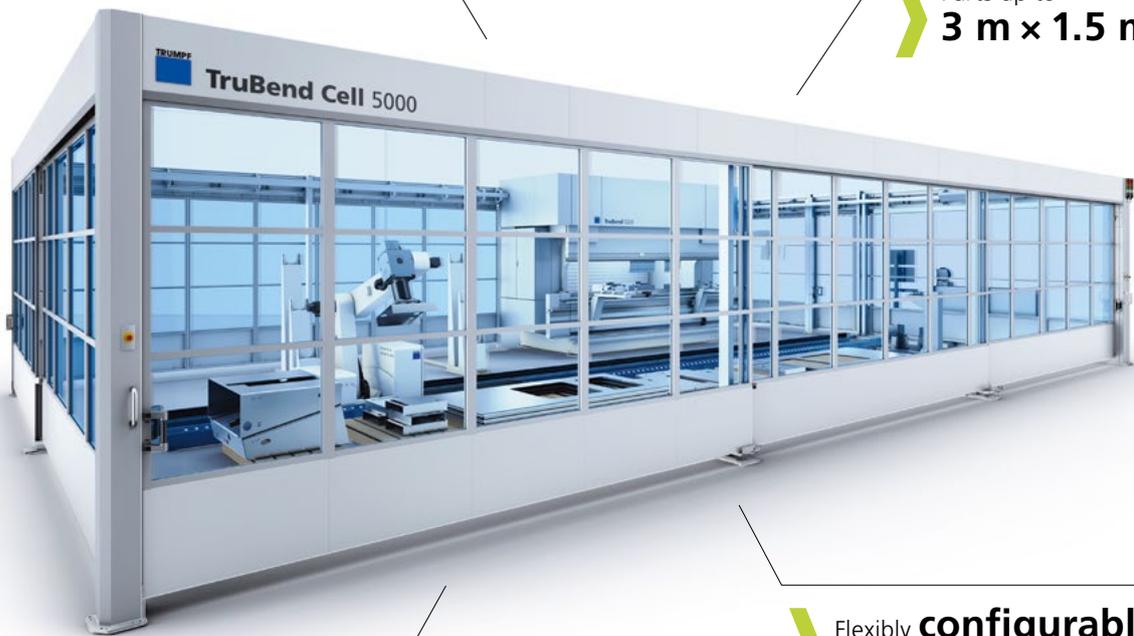
Productive bending due to automatic tool changing

The productive all-purpose bending cell

TruBend Cell 5000

Parts weighing up to
100 kg

Parts up to
3 m × 1.5 m



Flexibly **configurable**
to meet your needs

Utmost **part precision**
with angle sensors

This flexible bending cell featuring the BendMaster, an integrated bending robot, is especially productive in manufacturing your individual parts range. Depending on the weight and size of the parts, you select the machine and BendMaster format appropriate for you.

With its mechanical and vacuum gripper, the BendMaster reliably takes parts through the bending process. Thanks to the automatic gripper change, the cell carries out the most diverse orders one after the other with ease. The tool change is automated by the ToolMaster. You can shape the material flow of your TruBend Cell 5000 according to your requirements using conveyor belts and pallet conveyors.

“With the automatic bending cell, we have succeeded in killing two birds with one stone. We relieve our employees of heavy physical effort while at the same time becoming more profitable.”

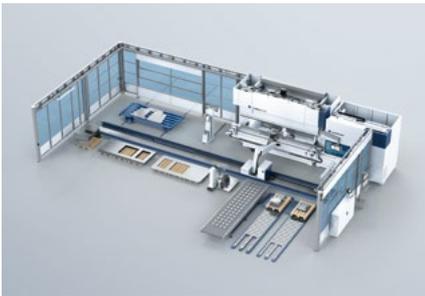
Dirk Matyssek, Matyssek Metalltechnik GmbH



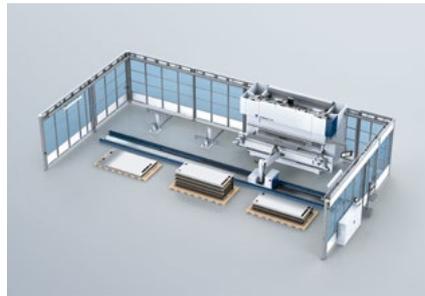
The mechanical gripper with transversing and rotary axes is highly productive when processing small parts.



Automatic tool changer ToolMaster.



TruBend 5320 with BendMaster (60), 14 m path, sheet removal station with rotary table, two gripper changing consoles, ToolMaster, conveyor belt and two pallet conveyors.



The TruBend 5230, BendMaster (150), with a 14 m track length and gripper change console.



Experience the
TruBend Cell 5000
in action:
[www.trumpf.info/
tlhx6](http://www.trumpf.info/tlhx6)



Technical data			
TruBend Cell 5000		TruBend Cell 5000 with BendMaster (60)	TruBend Cell 5000 with BendMaster (150)
TruBend Series 5000		From 5130 to 5230	From 5130 to 5230
Max. component size	mm x mm	2000 x 1000	3000 x 1500
Profiles	mm	Up to 2500	Up to 4000
Max. component weight	kg	40	100
Max. carrying capacity	kg	60	150
Min. sheet thickness	mm	0.7	0.7
Path length	m	8–16	8–16
Max. blank stack	mm	700	700
Max. stack height for finished parts	mm	1000	1200

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The innovative high-speed bending cell

TruBend Cell 7000

100%*
more output

Optimized **material flow** on 21 m²



Reliable processes
with intelligent sensor technology

User-friendly **offline programming**

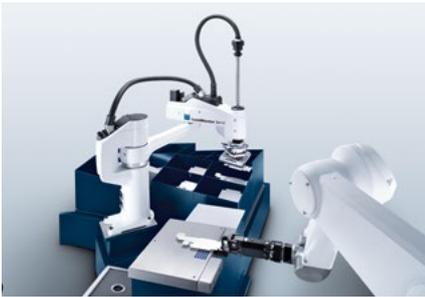
The TruBend Cell 7000 is the fastest system in the world for the automated bending of small parts. Two synchronized robots work in parallel to supply material and bend parts. This gives you the edge on high productivity with unbeatable low part costs.

Fast individual components and perfectly coordinated processes make it possible to achieve a part throughput that is twice as high as with conventional bending cells. Thanks to the automatic tool changer, ToolMaster Bend, you can carry out work orders with exceptional flexibility – even for small batch sizes. Offline programming is efficient and reduces downtime. The system pallet of the LoadMaster Bend can provide up to 24 different components.

* Compared to manual bending; depends on part geometry.

“This is a real innovation for me – the part feed, the flexibility of the system pallets and the LoadMaster. The cell is simply well-rounded.”

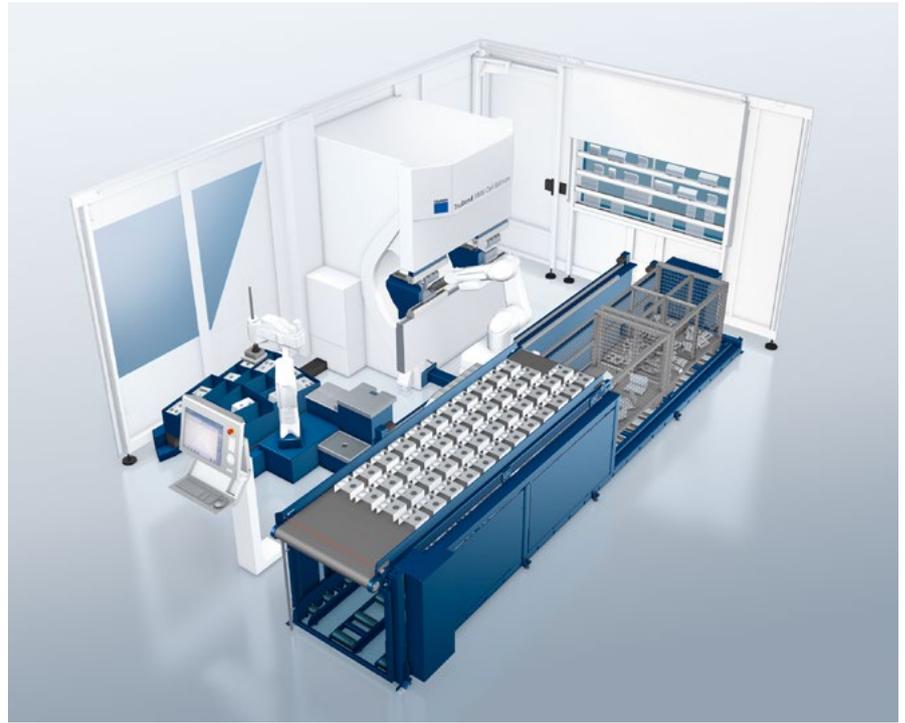
Manfred Wujesch, Wincor Nixdorf Manufacturing GmbH



LoadMaster with system pallet.



The ToolMaster Bend equips tools fully automatically.



TruBend 7036 Cell Edition, BendMaster (15), LoadMaster Bend, ToolMaster Bend and conveyor system.



Experience the **TruBend Cell 7000** in action:
www.trumpf.info/jy4er9



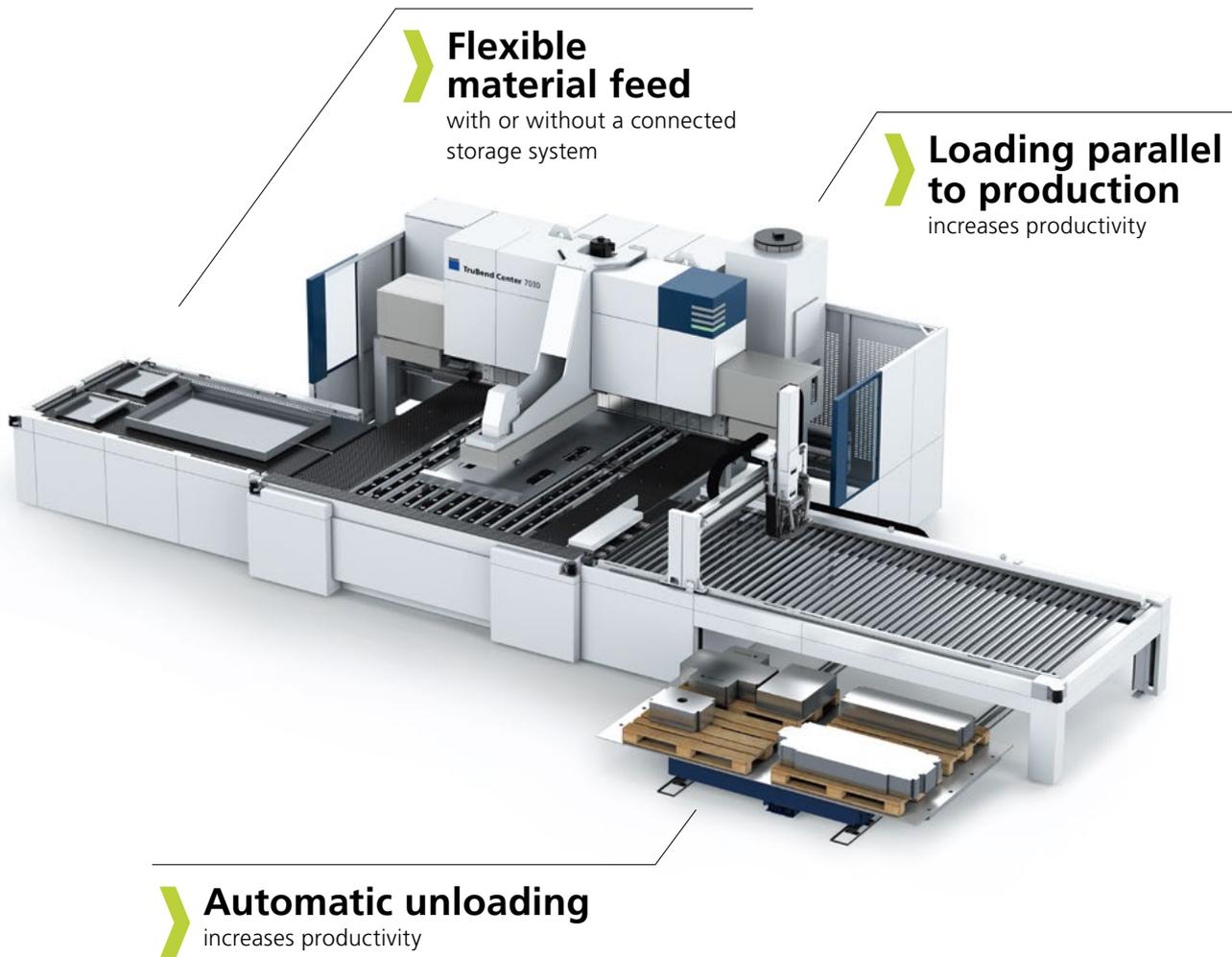
Technical data

TruBend Cell 7000		TruBend Cell 7000 with BendMaster (15)
Max. component size	mm x mm	500 x 380
Max. sheet thickness	mm	6
Max. component weight	kg	3
Max. carrying capacity	kg	15
Press force	kN	360
Working speed	mm s	Up to 50 mm s
Dimensions	mm x mm	5500 x 3870

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Fully automatic panel bending

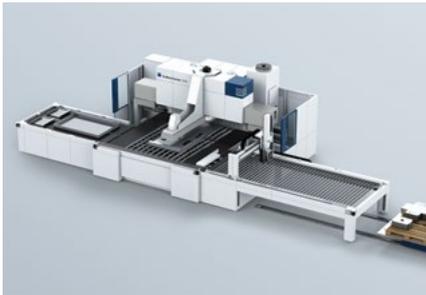
TruBend Center 7030



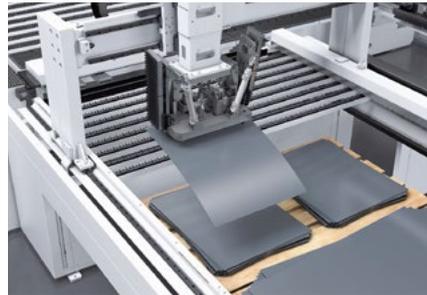
With the right automation, your TruBend Center 7030 loads and unloads by itself. On the loading side, the loading unit picks up the blanks parallel to production and guides them to the processing step. Material flow and accessibility are optimized by using the loading cart where you can simply place blanks on pallets. Even a direct storage connection is possible for unloading, the machine uses two conveyor belts to buffer finished components. A robot interface is available for automatic unloading.

“With TRUMPF panel bending machines, I have discovered completely new ways of manufacturing, which enable me to find individual solutions for special parts.”

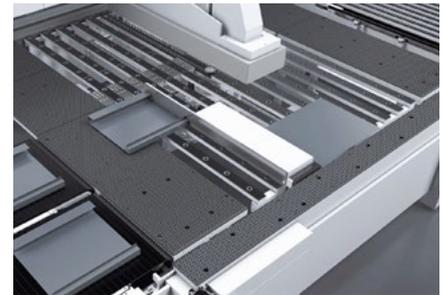
Jürgen Bickel, Managing Director, Bickel Blechtechnik



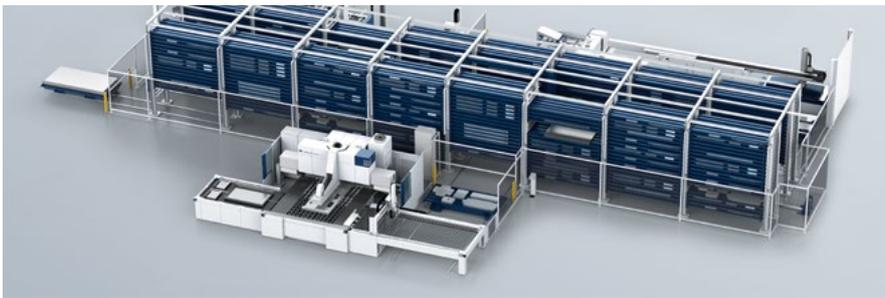
Installation version: You can position the loading cart at the side or front depending on your production requirements.



The suction gripper loads the TruBend Center 7030 automatically with large or small blanks while the machine is working.



The two conveyor belts for unloading can be timed individually or synchronously. Finished parts are removed manually or by the robot.



Save space, walkway and searching time, with a storage system connected directly to your TruBendCenter 7030.



Experience the **TruBend Cell 7030** in action: www.trumpf.info/w6nm41



Technical data			
TruBend Center 7030			
		Loading cart sideways/front	Loading cart with storage system connection
Max. sheet format	mm	3120 × 1500	3048 × 1500
Max. load loading cart	kg	3000	3000
Loading height incl. pallet above floor version	mm	300	300
Loading height including pallet underfloor version	mm	330	300
		Loading/Unloading unit	
Suction area folded (vacuum suction)	mm	120 × 120	
Suction area unfolded (vacuum suction)	mm	120 × 1100	
Max. blank size	mm	3120 × 1500	
Min. blank size	mm	350 × 350	
Max. size of finished parts	mm	2910 × 1500	

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Productive bending thanks to automatic tool changing

ToolMaster

Change tools
in seconds

Space for 65 m
bending tools on average



Standard, ACB, and special tools can be implemented

Integrated parking position
for the bending aid or
the supporting bracket

Change tools automatically

Retooling a bending machine during each program change is laborious. The ToolMaster carries out these setup operations for you. Standard tools, as well as sensor tools and tools with adapters can be stored. The average space available is about 65 m of tool length. Not only do you save time and energy while the ToolMaster automatically sets up your tools, your productivity increases in particular. Searching and walking times are eliminated completely. Its positioning accuracy makes station operation easier for you. The closed storage protects your tools from dirt and corrosion.

“Tasks that used to take time and effort are now done by the ToolMaster. It carries heavy tools and provides the operator with more time – a considerable improvement. The ToolMaster belongs in any modern production system!”

Kaysser GmbH + Co. KG



ToolMaster connected to a TruBend machine.



Depending on the component, upper tools have to be set up so they are rotated. The rotary unit of the ToolMaster carries this out parallel to production.

Technical data		
ToolMaster		TruBend Series 5000 (B23)^[1]
Max. setup length	m	4.4 (TruBend 5320)
Tool magazine		
Tool type		TRUMPF standard and special tools Tools with adapters ACB tools
Storage capacity, upper tools	m	ø 40
Max. upper-tool height	mm	340
Storage capacity, lower tools	m	ø 45
Max. die width	mm	Up to 120
Speeds		
Positioning speed tools	mm	± 1

^[1]Requirement: Larger open height, BendGuard Automatic, right support arm, hydraulic upper tool clamp.
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“Whether a novice or an advanced user, we offer you the full range of solutions: from compact to large storage systems.”

Dominik Straus, Product Marketing – Automation and Processes

Storing more efficiently

With TRUMPF storage and logistics systems, you have a modular kit of intelligent storage solutions. The right storage system improves the material flow and ensures smooth production processes. Utilize your machines more effectively and save space, time and money.

STORAGE + LOGISTICS SYSTEMS

TruStore Series 1000 _____	66
Practical entry-level store	
TruStore Series 3000 _____	68
The most flexible storage system	
Material buffer _____	70
Starting with unattended shifts	
Large storage systems _____	72
The utmost efficiency for your manufacturing operations	

Practical entry-level store

TruStore Series 1000



33 metric ton storage capacity in large format

Up to **50%*** higher machine utilization rate

Expandable
to a TruStore Series 3000

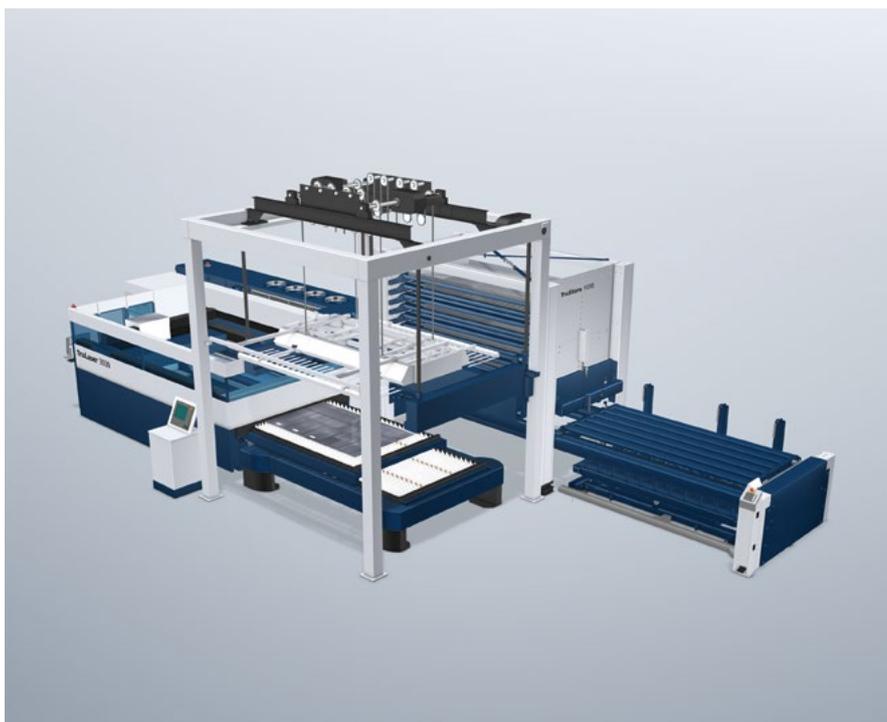
The reliable and economical compact store facilitates material handling and offers you the perfect entry into TRUMPF storage technology.

The TruStore Series 1000 seamlessly complements your automated sheet metal production and makes you even more efficient. The store is served by the LiftMaster Store or LiftMaster Store Linear. With a pallet lift, you can upgrade your TruStore Series 1000 to a TruStore Series 3000.

*Two shifts during the day, with an additional unattended shift at night.

“The compact storage system creates more free space for our TruStore production facility.”

Radek Tybl, Plant Manager – TRUMPF Liberec



A TruLaser with a TruStore 1030 and LiftMaster Store.



Experience **TruStore** in action:
www.trumpf.info/urnl28



Technical data			
TruStore	Large format		Maximum format
	1030		1040
Direct connection to		LiftMaster Store	
Max. sheet format	mm x mm	3048 x 1524	4064 x 2032
Max. system height	mm	3890	3890
Max. loading height per pallet	mm	90 170	90 170
Max. weight per pallet	kg	3000	5000
Max. pallet quantity ⁽¹⁾		10	7
Max. storage capacity ⁽¹⁾	t	30	35
Typical equipment			
Cart systems	R	<input type="checkbox"/>	<input type="checkbox"/>
Auxiliary pallet operation	R	<input type="checkbox"/>	<input type="checkbox"/>

Optional R Retrofit possible ⁽¹⁾Loading height of 90 mm.

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The most flexible storage system

TruStore Series 3000

Up to **100%*** higher
machine utilization rate

Up to **222** metric ton storage
capacity in large format



Up to **85%** reduction
in space requirements

Flexible **conversion
and expansion**
at any time

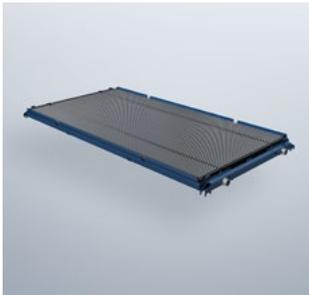
The dynamic compact storage system grows with your requirements, reduces space requirements and can be expanded to a fully automatic system.

The TruStore Series 3000 comes standard-equipped with storage tower and pallet lift. You can choose the height of your storage system from fifteen possible levels, with storage compartments adjustable to 90, 170 or 260 mm. The storage system can be conveniently connected to your TRUMPF 2D laser cutting system, punching machine or punch laser machine. Thanks to the modular principle, it can be expanded at any time.

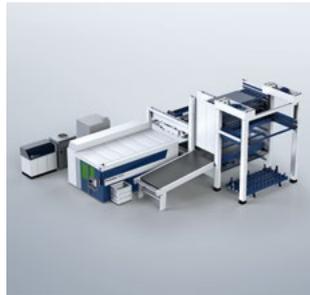
* Two shifts during the day, with an additional unattended shift at night and non-stop on weekends.

“Major added value comes from the modular structure, thanks to which this store – probably the most flexible one around – can be easily expanded at any time.”

Vit Suchomel, Head of Development TruStore, TRUMPF Liberec



Space-saving storage of auxiliary pallets with storage cartridges.



PartMaster integration; the TruStore with TruLaser 3030 fiber.



The TruLaser 3030 with a LiftMaster Compact, directly connected to a TruStore 3030.



The TruMatic 7000 with a SheetMaster and double cart, indirectly connected to a TruStore 3030.



Experience **TruStore** in action:
www.trumpf.info/urnl28



Technical data			
TruStore	Large format		Maximum format
	3030		3040
Direct connection to	LiftMaster Compact LiftMaster Store LiftMaster Store Linear		
Indirect connection (via cart systems) to	TruLaser Center 7030 SheetMaster LoadMaster LiftMaster LiftMaster Sort LiftMaster Linear LiftMaster Linear Basic ⁽¹⁾		
Max. sheet format	mm	3048 × 1524	4064 × 2032
Max. system height	mm	8250	8410
Loading and unloading height per pallet	mm	90 170 260	90 170 260
Max. weight per pallet	kg	3000	5000
Max. pallet quantity ⁽²⁾		74	54
Max. storage capacity ⁽²⁾	t	222	270
Typical equipment			
Pallet lift		■	■
Weighing system		■	■
Cart systems	R	□	□
PartMaster integration	R	□	□
Store cassettes for europallet, laser support pallet	R	□	□
Multi-machine connection	R	□	□

■ Standard □ Optional R Retrofit possible – Not available

⁽¹⁾LiftMaster Linear Basic only with large format 3030. ⁽²⁾At max. system height, two-tower version, loading height 90 mm, front machine connection, indirect and lateral loading | unloading in the same tower.

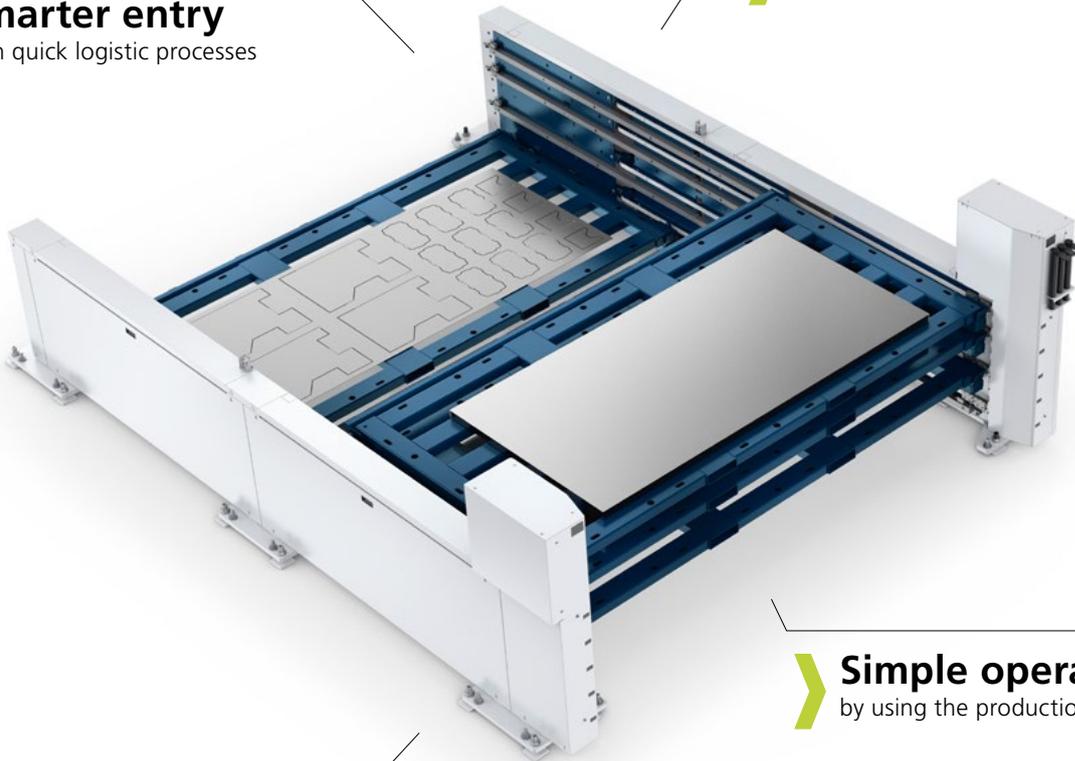
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Starting with unattended shifts

Material buffer

Smarter entry
with quick logistic processes

Compact layout
Process large orders, in a small area



Simple operation
by using the production plan

Great variety
to meet your individual needs

An easy start to automated production

The material buffer expands your production capacity – by day and by night. After the raw material is loaded in the micro-store, it is made available with an automated loading unit. The cut sheets are also unloaded in the material buffer. While the machine is running, workers can devote themselves to other tasks – this also applies at night.

With the material buffer, an automated loading and unloading unit and the laser cutting machine, you can process large orders in a small area. You gain a lot of space on your shop floor, especially when compared to cart-based solutions. At the same time, you increase your post-processing storage capacity – and that at low costs.

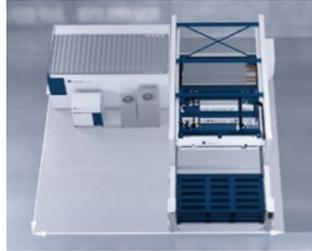
To make the transition to the automated production as easy as possible, TRUMPF offers a number of material buffers. With this choice, you can best exploit your potential and expand your production capacity in a way tailored to your own working processes. This is because the total cycle time in an automated system is substantially shorter than that of a manual loading system. Starting with automated production is not difficult because the handling of the system and control via the production plan are simple.

“The material buffer is the perfect entry point for automated production. It is easy to use, secure and enables an additional shift!”

Stefan Häußermann, Product Manager Automation



Investment with great potential.



Compact layout – perfect for limited space.



Entry-level system with fast and simple logistic processes.



Starting with automated production – by day and by night.



Large variety for your individual needs.



Experience the **material buffer** in action:
www.trumpf.info/3r2a78



Technical data		
Material buffer		Large format
		1530
For TruLaser machine(s)		1030 fiber 3030 3030 fiber 5050 5030 fiber
Max. sheet format	mm x mm	3000 x 1500
Min. sheet format loading unloading	mm x mm	1000 x 1000 150 x 150
Max. weight per storage compartment	t	3
Storage compartment including pallets	number	3/4 or 5
Max. stack height	mm x mm	90 170 260
Typical equipment		
Pallet detection	R	■
Collision monitoring	R	■
Unloading floor for finished parts	R	□
Stack height monitoring	R	□
Packing and unpacking station	R	□
Additional pallets	R	□
Storage tower	R	□
Extended storage tower	R	□

■ Standard □ Optional R Retrofit possible

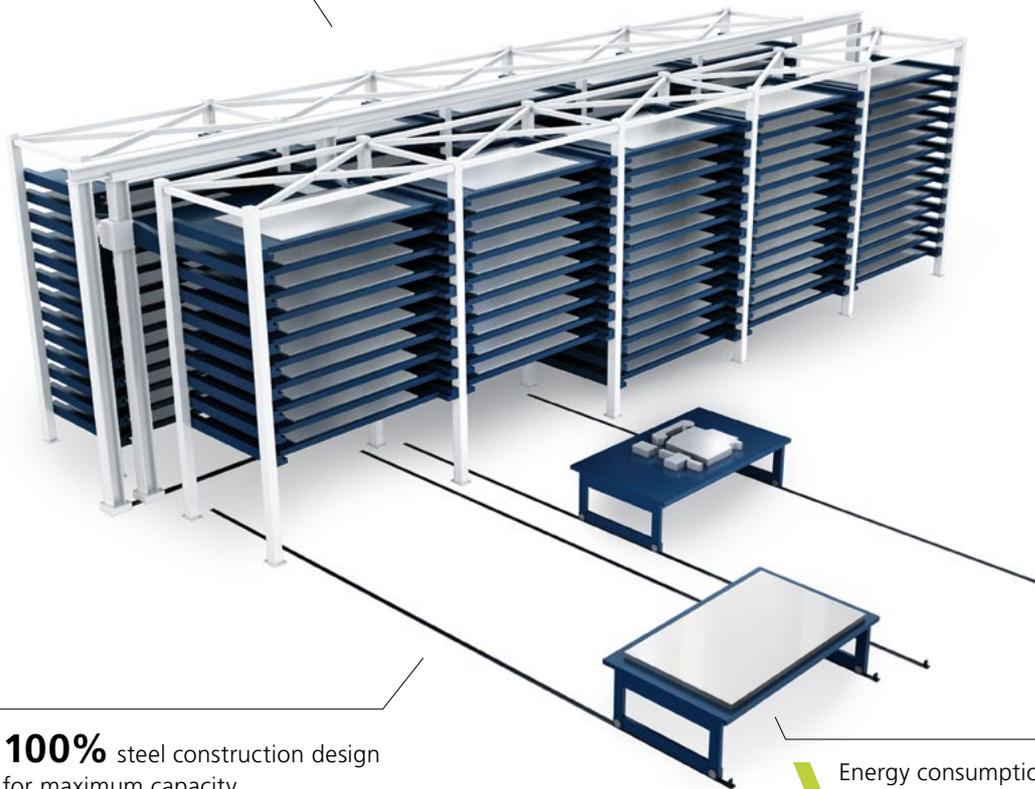
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Utmost efficiency for your manufacturing operations

Large storage systems

Non-stop productivity
24/7

Low
service and maintenance costs*



100% steel construction design
for maximum capacity

Energy consumption cut by up to
25%* through recovery

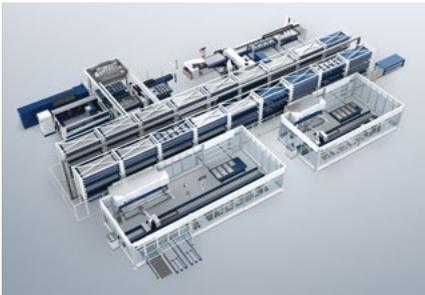
STOPA large-scale storage systems are more than just material stores – they take on the comprehensive tasks of a logistics center for your production setup.

Due to its modular design, your STOPA large-scale storage system is fully flexible in terms of length, width, height, and sheet size. Even in the most confined area, it offers plenty of space for unprocessed sheets, finished parts, scrap skeletons and tube profiles. A practical pallet lift lets you maneuver storage pallets.

* Compared to conventional large storage system.

“The competition in sheet metal processing is enormous. With the STOPA high storage bay system, we were able to significantly improve the part quality and our productivity through automated material management. In this way, we try to increase the efficiency – for us and for our customers.”

Kwak Yun Chon, Laser Center, Siheung



Smooth material flow in a fully automated system.



Experience the **large storage systems** in action:
www.trumpf.info/8vd2an



Technical data				
STOPA large-scale storage systems		Sheet metal ^[1]		Tube ^[1]
		Large format	Maximum format	LG-U
Direct connection to		LiftMaster Compact LiftMaster Store LiftMaster Store Linear		–
Indirect connection (via cart systems) to		SheetMaster LoadMaster LiftMaster LiftMaster Sort LiftMaster Linear LiftMaster Linear Basic ^[2]		LoadMaster Tube
Max. sheet format	mm	3048 × 1524	4064 × 2032	–
Storage system length	mm	–		3000–6000
Max. system height	m	16		25
Loading height per pallet	mm	90 275	90 315	–
Max. weight per pallet cartridge	t	3	5	5
Pallet quantity		> 100		80–500
Storage capacity	t	> 300	> 500	400–2500
Typical equipment				
Pallet lift		■	■	■
Order picking tower		□	–	–
Building-supporting structure		□	□	□
Weighing system		□	□	□
Cart systems	R	□	□	□
Quick pallet changer tandem stations	R	□	□	–
Auxiliary pallet operation	R	□	□	–
Multi-machine connection	R	□	□	□

■ Standard □ Optional R Retrofit possible – Not available

^[1] Further formats upon request. ^[2] LiftMaster Linear Basic only with large format.

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Automation will pay off for

Regardless of the degree of automation you choose, you will still benefit from the decreasing unit costs and increasing productivity.

Check it out for yourself!

As an example, the calculation shows the four levels of automation for your TruLaser Series 3000 and 5000 and their effects. The best thing to do is to calculate and see for yourself what your economic benefit would be.

NON-AUTOMATED MACHINE

Laser cutter system TruLaser Series 3000 or 5000



INVESTMENT	Total delivery value incl. freight, training, software	<div style="border: 1px solid black; width: 100%; height: 30px; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; align-items: center;"> × 4.5 </div> <div style="display: flex; justify-content: space-between; align-items: center; margin-bottom: 5px;"> × 2 </div> <div style="display: flex; justify-content: space-between; align-items: center;"> × 1.3 </div>
COO	Typical service life in years ^[1] Operating hours per year (example) System costs per hour Employee costs per hour Percentage/number of employees per machine Labor costs per hour Leasing costs for external sheet metal storage per hour Logistics costs (forklifts and drivers) per hour System costs + employees + storage + logistics per hour	<div style="border: 1px solid black; width: 100%; height: 30px; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; align-items: center; margin-bottom: 5px;"> : 3520^[2] </div> <div style="display: flex; justify-content: space-between; align-items: center; margin-bottom: 5px;"> = </div> <div style="border: 1px solid black; width: 100%; height: 30px; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; align-items: center; margin-bottom: 5px;"> × 100% 1 </div> <div style="display: flex; justify-content: space-between; align-items: center; margin-bottom: 5px;"> = </div> <div style="display: flex; justify-content: space-between; align-items: center; margin-bottom: 5px;"> + </div> <div style="border: 1px solid black; width: 100%; height: 30px; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; align-items: center; margin-bottom: 5px;"> + </div> <div style="border: 1px solid black; width: 100%; height: 30px; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; align-items: center; margin-bottom: 5px;"> + </div> <div style="border: 1px solid black; width: 100%; height: 30px; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; align-items: center;"> = </div>
PART COSTS	Productivity (quantity of parts produced) per hour – theoretical Degree utilization of the system (through material flow) – actual ^[5] Productivity in units – actual Production costs per sample workpiece	<div style="border: 1px solid black; width: 100%; height: 30px; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; align-items: center; margin-bottom: 5px;"> : 100 </div> <div style="border: 1px solid black; width: 100%; height: 30px; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; align-items: center; margin-bottom: 5px;"> : 70% </div> <div style="border: 1px solid black; width: 100%; height: 30px; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between; align-items: center; margin-bottom: 5px;"> : 70 </div> <div style="display: flex; justify-content: space-between; align-items: center;"> = </div>

^[1] Usually the useful life of a storage system is longer than that of machines, therefore the actual production costs should be rated lower.

you, too!

PARTIALLY AUTOMATED MACHINE

Laser cutter system TruLaser Series 3000 or 5000

1 x LiftMaster Compact



FULLY AUTOMATED MACHINE WITH STORAGE CONNECTION

Laser cutter system TruLaser Series 3000 or 5000

1 x LiftMaster Compact

1 x TruStore 3030 (double tower) with approx. 30 pallets

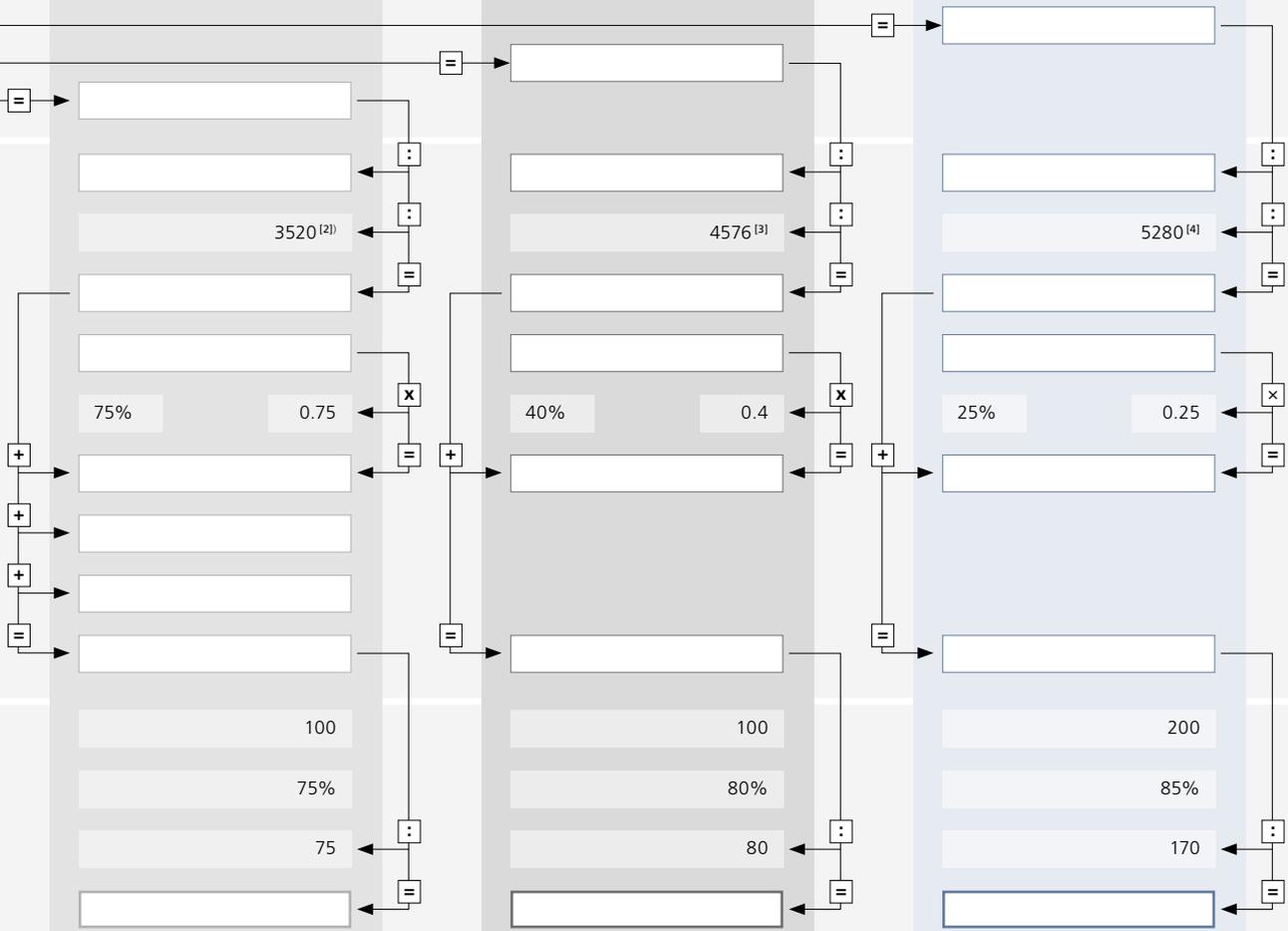


FULLY AUTOMATED MANUFACTURING IN ALL PROCESSES

2 x laser cutting system

2 x LiftMaster Compact

1 x STOPA large-scale storage system (14 towers) with approx. 300 pallets



^[2] 2 shifts at 220 workdays per year

^[4] 3 shifts at 220 workdays per year

^[3] 2 shifts at 220 workdays per year + 30% unattended production.

^[5] Increases due to improved material flow.

Flexible financing

Ready for the future and tailored to your needs – what is true for your machinery should also apply to your financing model. Therefore, choose the appropriate financing solution directly from the manufacturer.

Benefits for you

You can use first-class solutions at attractive terms and conditions, and with the usual TRUMPF quality. Additionally, you get a clear basis for calculation and can increase your financial flexibility.

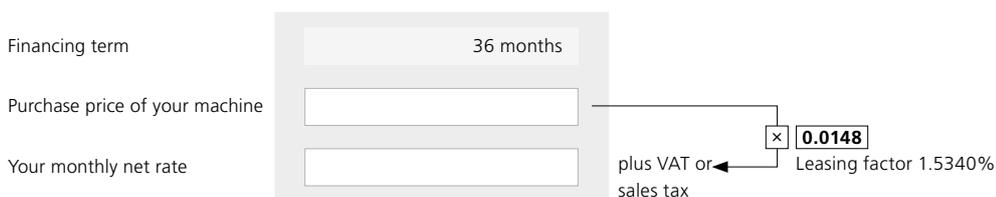
Whether by leasing, lease-purchase or loan: Every third TRUMPF machine tool worldwide is already being financed based on our offers. Customers in 23 countries place their trust in TRUMPF Financial Services.



To find out what financing offers are available in which countries, please see:

www.trumpf-machines.com/de/services/financing

Calculate your monthly leasing rate yourself!*



* Calculation example; actual offer depends on your credit rating and current interest rates.

In this example, the down payment and the residual value amount to 10% of the purchase price of the machine.

Questions to safeguard your future

You plan the future of your company in the medium to long term. Even automation is often implemented gradually. The following questions are intended to help you determine your requirements and identify your goals. Together we develop an individual plan in order to tap the automation potential of your production in the best possible way.

CHECKLIST

- | | | | | |
|----|--|---|--|--------------------------|
| 1. | | How many shifts are being run at capacity each day? | | <input type="checkbox"/> |
| 2. | | What technologies do you utilize (laser cutting, punching, etc.)? | | <input type="checkbox"/> |
| 3. | | Which material mix and which formats do you process? | | <input type="checkbox"/> |
| 4. | | How high is your total production throughput and how much per year? | | <input type="checkbox"/> |
| 5. | | What is your standard batch size? | | <input type="checkbox"/> |
| 6. | | What are your spatial conditions (available space, existing facilities, new construction)? | | <input type="checkbox"/> |
| 7. | | Which types of machines are to be automated? | | <input type="checkbox"/> |
| 8. | | What degree of automation are you considering (non-automated, partially automated or fully automated machinery/production)? | | <input type="checkbox"/> |

Feel free to contact us – we welcome your questions and will gladly advise you as needed.

Passion is what drives us

Whether it's production and manufacturing technology, laser technology, or material processing – we develop highly innovative products and services for you which are tailored to your industry and which are absolutely proven and reliable. We put everything we've got into giving you a compelling, competitive edge: expertise, experience, and above all passion.



Check out our
YouTube channel:
[www.youtube.com/
@TRUMPFtube](http://www.youtube.com/@TRUMPFtube)



Solutions for your future

With a step-by-step introduction to your Smart Factory, you can take advantage of digital networking opportunities. We partner with you on the path to networked production, delivering pragmatic, economical solutions that make your processes both more transparent and flexible.

This will allow you to maximize your resources while ensuring your production is fit for the future. We support you every step of the way until your production runs perfectly for your needs.

Machines & systems

Laser cutting in 2D and 3D, punching, bending, laser welding and punch laser processing: With custom-fit machine tools, laser systems, software, and automation from TRUMPF, you can master flexible sheet metal and tube processing. Additive manufacturing solutions round off our portfolio – a portfolio that includes consulting, software, and services.



Lasers

Whether for cutting, welding, marking or processing surfaces, with lasers from TRUMPF you have the universal tool for your industrial applications. Choose the ideal system solution for you from the macro, micro and nano ranges. We will also support you with software solutions, application knowledge and consulting.



VCSEL solutions & photodiodes

Laser and photodiodes from TRUMPF Photonic Components come into their own in numerous applications: in the industrial and consumer markets and even in optical data communication. A VCSEL (Vertical Cavity Surface Emitting Laser) laser diode emits light perpendicular to the plane of the semiconductor chip. In the TruHeat VCSEL systems, millions of VCSELs generate infrared heat, which is used for laser heat treatment.



Power electronics

Nothing's hi-tech without a process power supply: With generators for plasma technology, industrial heating, battery inverter systems and microwave amplifiers, you get power at the frequency and performance you need. These technologies can be found in smartphones, for example, on glass facades, in PV systems or in microchips.



Power tools

Whether for cutting, connecting, and edge forming of sheet metal, professionals all over the world rely on the user-friendly electric and battery-powered tools from TRUMPF. On construction sites and in workshops, the quality products manufactured in Switzerland convince, gain and retain fans with their modern technology and perfect handling.



TRUMPF is certified for ISO 9001
(Find out more: www.trumpf.com/s/quality)



TRUMPF Werkzeugmaschinen SE + Co. KG
www.trumpf.com