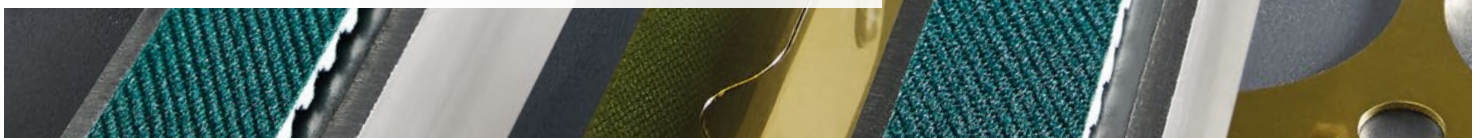


TRUMPF



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. TruConnect connects 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 →



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:
https://www.trumpf.com/en_US/magazine/smart-connectivity-step-by-step/

TruConnect: Climb on board

Connecting your company to the digital sphere means you gain a lot of freedom. In fact, even after taking the very first step, you can already see improvement in the transparency of your production system. Automate your processes with TruConnect, the range of solutions from TRUMPF designed to get the most out of Industry 4.0. You can do just that in three simple steps, tailored exactly to your personal business situation: from **getting started** and **improving gradually** through to being **entirely connected**. So why not climb on board today?



Getting started

FBT Feinblechtechnik GmbH



“See things more clearly and speed up production: the throughput time fell by 40% after introducing a control system.”

Ralf Stirl, CEO,
FBT Feinblechtechnik GmbH



Improving gradually

KNOLL Maschinenbau GmbH



“A quick response and fast processes: due to optimization measures, productivity in sheet metal processing increased by 25%.”

Joachim Riebsamen,
Head of the Shell Construction Department,
KNOLL Maschinenbau GmbH



Entirely connected

Shandong New Beiyang Information Technology Co., Ltd.



“Boosting transparency and productivity with 3-shift operation: 120,000 units produced each year. Output increased by 20% due to automation.”

Liu Bo, Production Manager,
Shandong New Beiyang
Information Technology Co., Ltd.



Link to customer story:
https://www.trumpf.com/en_GB/products/smartfactory/fbt-feinblechtechnik-customer-story/



Link to customer story:
https://www.trumpf.com/en_GB/products/smartfactory/knoll-customer-story/

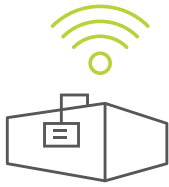


Link to customer story:
https://www.trumpf.com/en_US/products/smartfactory/snbc-customer-story/

Automation concepts perfectly tailored to your needs

Logistics concepts

With customized large storage systems, we offer not only a machine or storage system, but a comprehensive production concept. With this approach, the entire production process is in focus: from bringing the raw sheet into the process right through to the bent and painted finished part. Together we work out the optimal material flow solution for your production.



Getting started

Small to medium autonomous cell

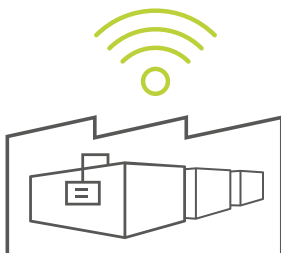
One or two machines are connected to automated devices for loading, unloading, and potentially sorting. A storage tower unit supplies the machine with raw material and can later be used to store cut sheets. The system functions as an autonomous production cell.



Improving gradually

Customized material storage system

Machines are connected to a large storage system which supplies each machine with raw material. The material flows only in one direction – from storage unit to additional processes. This concept is highly efficient if the storage unit is installed close to a wall, and the machines are connected to one side of the unit.



Entirely connected

Customized full logistics center

Machines are connected to a large storage system that handles raw material and semifinished goods automatically between various processing steps. The storage unit is situated at the center of the production hall and thus serves as a logistics system to which the machines are connected on both sides. Hence the material flow can be channeled in various directions, while at the same time, the storage unit serves as a buffer for production purposes. Central to this structure is overall process control and monitoring.



“Material storage systems, both small and large, have a significant impact on intralogistics and overall efficiency in a sheet metal shop. It is important to understand all benefits in order to tailor the right system for each customer.”

Tobias Reuther, Director TRUMPF Smart Factory Ditzingen

Customized large storage system comparison		
Customized raw material storage system		Customized complete logistics center
One direction (away from storage system)	Material flow	Bidirectional
Raw material storage system	Storage serves as	Raw material storage system Semifinished goods buffer Means of transport
Along a wall	Located	In the center of the hall
Lower investment	Economic effects	Higher investment, but cost advantages in subsequent processes (quality, required forklifts, etc.)
Raw material	Buffering	Raw material semifinished goods
Commissioning by the operator immediately after punching or laser processing	Manual material handling	Manual material handling minimized
Well suited for quick lead times	Lead times	Minimum lead times are not pursued without limitation
Single batch flow	Production principle	Pull principle, more work in progress (single batch flow)
Quick lead times Ideal material flow Lower investment	Main advantages	Storage and logistics service Process linking Higher flexibility

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.

“The innovative TruConnect solutions allow you to implement your Smart Factory step by step. With this in mind, no two paths are alike because you can combine the separate parts of TruConnect individually.”

Patrick Bauer, Product Marketing – Automation & Processes

Your experienced partner

>30 years

expertise in the market

>200

successfully realized projects per year

>50

new Smart Factories per year

>5,500

machines connected

>1,900

automated sheet metal processing systems realized worldwide

1

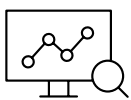
dedicated contact



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

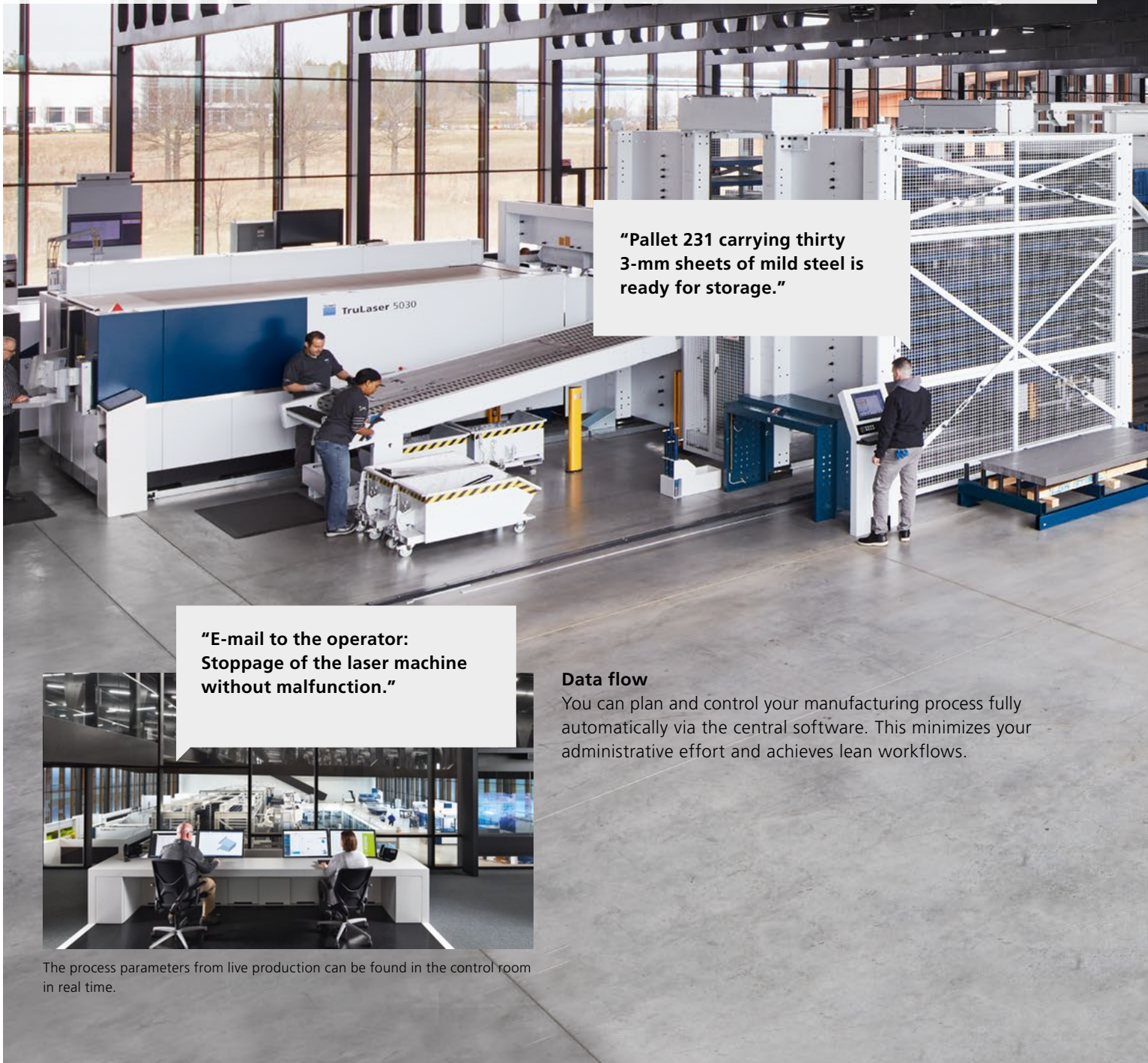


TRUMPF automation: **The result** –
report (part 3) via STAMM
Blechtechnik: www.trumpf.info/jurczg



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.

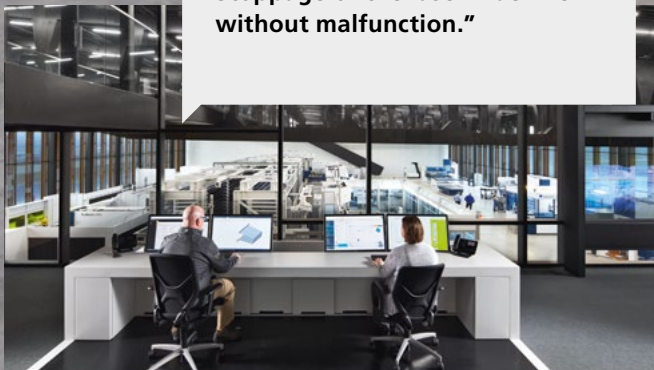


"Pallet 231 carrying thirty 3-mm sheets of mild steel is ready for storage."

"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/9bcope

Software brings transparency to your production system

Lot sizes are shrinking, complexity is increasing. How do you make the right decision despite this? How do you maintain control over your production system? By making all production processes transparent. Software solutions by TRUMPF will help you do this – from the initial inquiry right through to delivery. Here are three examples of this:

Produce complex parts with ease

The software ensures that all modifications during production are fully controlled and taken into account when delivering.

Streamlining processes

Whether inventory, machine power, or automation – keep an eye on all resources and use them to the fullest.

Optimizing production

A reliable tracing system ensures that improvements are analyzed and implemented with KPIs.

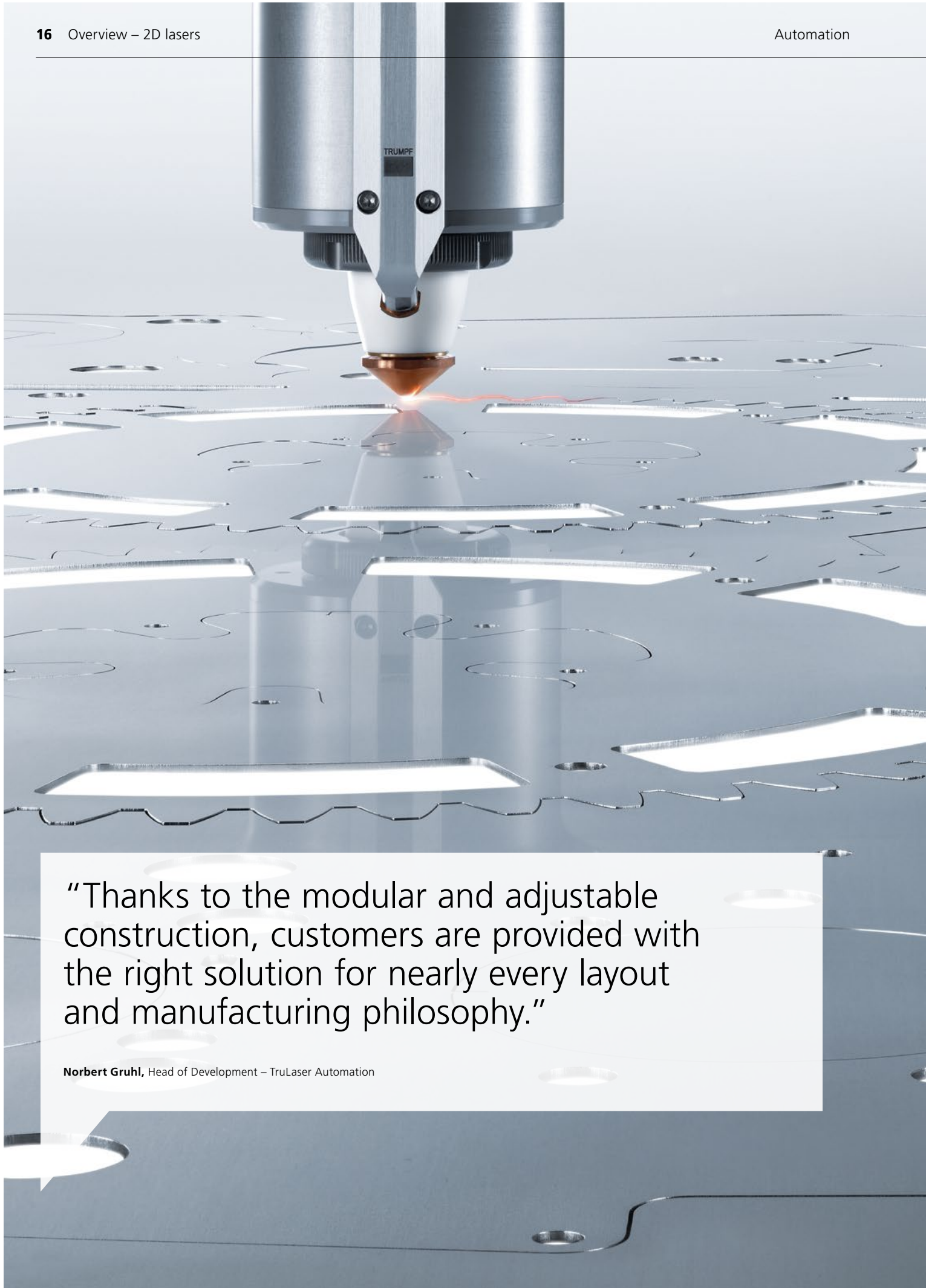


Learn more about the modularly designed solutions in our software brochure, "Improve transparency through digital networking".

Which software is the right fit for which process step?

This page shows you the software modules at a glance.

PROCESS	TASK	SOLUTION
Customer inquiry and quote preparation	Calculate quote	TruTops Calculate Webshop
	Create offer	TruTops Boost
	Enter customer order	TruTops Monitor and Fab app
Work preparation	Create internal work order	TruTops Fab Quickjob and Production modules
	Import/design part	TruTops Fab Storage Module
	Program order	TruTops Fab Customer and Purchase modules
Production	Assign job to machine	
	Monitor machine data	TruTops Monitor and Fab app
	Visualize machine status	TruTops Monitor and Fab app
	Take care of subassembly handling	TruTops Fab Quickjob and Production modules
	Notifications in the event of a malfunction	TruTops Monitor and Fab app
	Report job as complete	TruTops Monitor and Fab app
		TruTops Fab Customer and Purchase modules
Intralogistics and automation	Control automated storage	TruTops Fab Customer and Purchase modules
	Manage manual store	TruTops Fab Customer and Purchase modules
Dispatch and order completion	Order material	TruTops Fab Customer and Purchase modules
	Create delivery note	TruTops Fab Customer and Purchase modules
	Create invoice	TruTops Fab Customer and Purchase modules



“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 – TruLaser Automation

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 _____ **18**
Simple loading

LOADING + UNLOADING

LiftMaster Linear Basic _____ **26**
The lean portal solution

LOADING + UNLOADING + AUXILIARY PALLET OPERATION

LiftMaster _____ **20**
Flexible loading, unloading and sorting

STORE + LOGISTIC SYSTEMS

Material buffer _____ **32**
Starting with unattended shifts

PLACING OF SORTED FINISHED PARTS ON PALLETS

SortMaster _____ **30**
Fully automated sorting of small and large items

AUXILIARY PALLET MODE

PalletMaster Tower _____ **34**
The multiple pallet changer

LOADING + UNLOADING + SORTING + AUXILIARY PALLET MODE

LiftMaster Compact _____ **22**
Our best-in-class

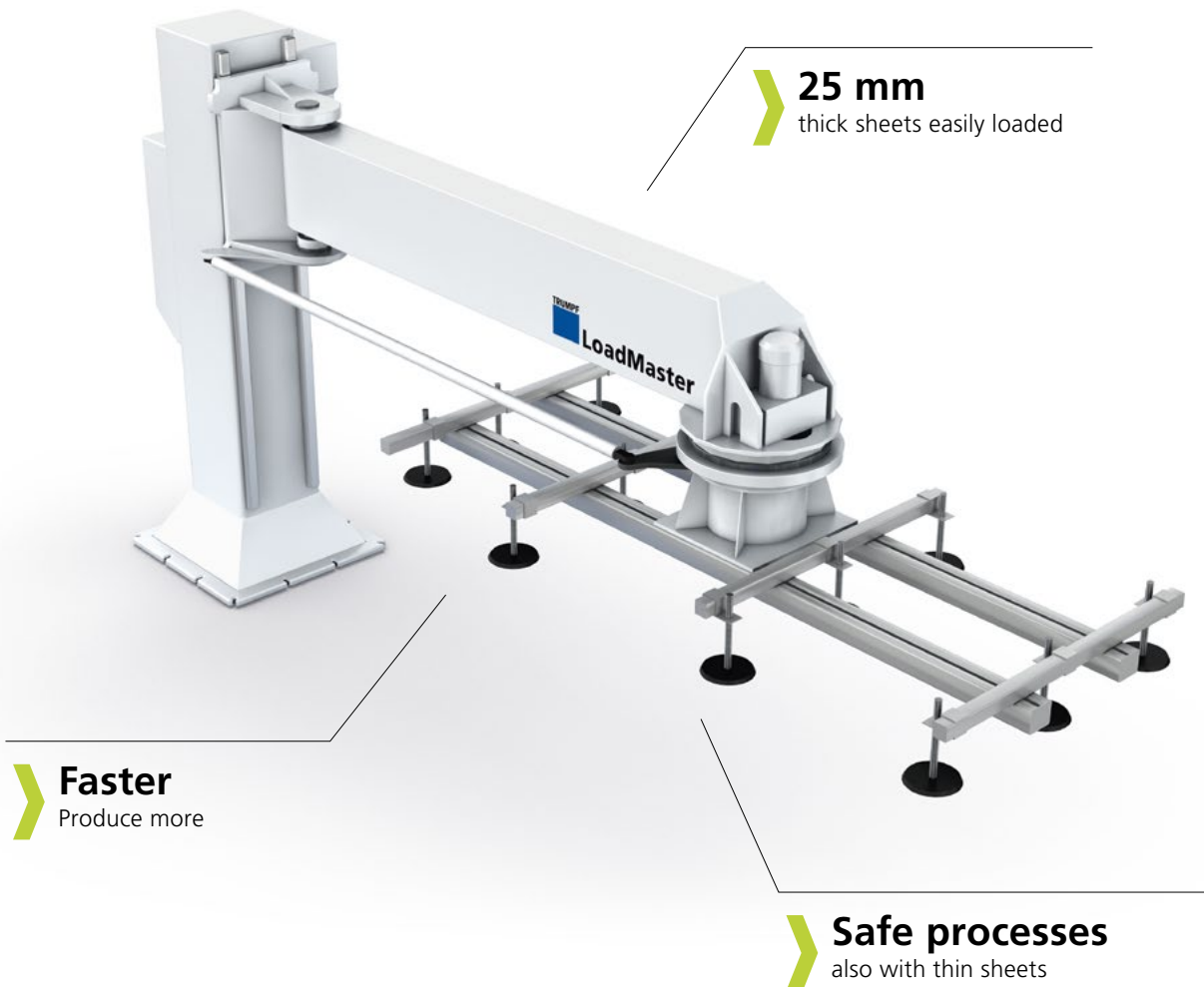
LiftMaster Linear _____ **24**
The universal portal solution

LiftMaster Store _____ **28**
The fastest connection to storage

LiftMaster Store Linear _____ **28**
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.

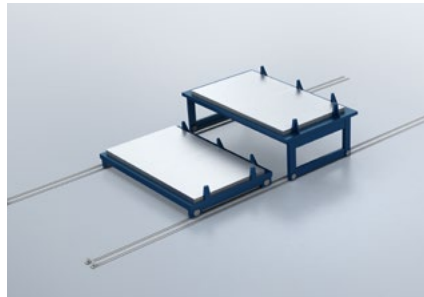
With the LoadMaster, you utilize your machine's capacity better and thus produce more at a reduced cost. Reliable processes are the key to this – for every sheet thickness. The peeler suction cup and fanning magnets provide additional help to ensure the process runs smoothly.

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

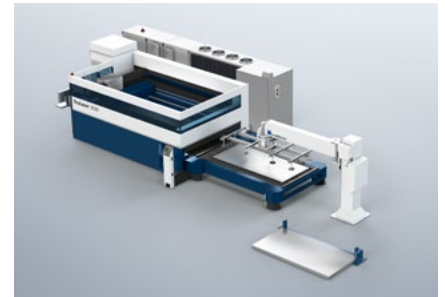
Mathis Schmidt, Development – TruLaser Automation



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/aytwhg



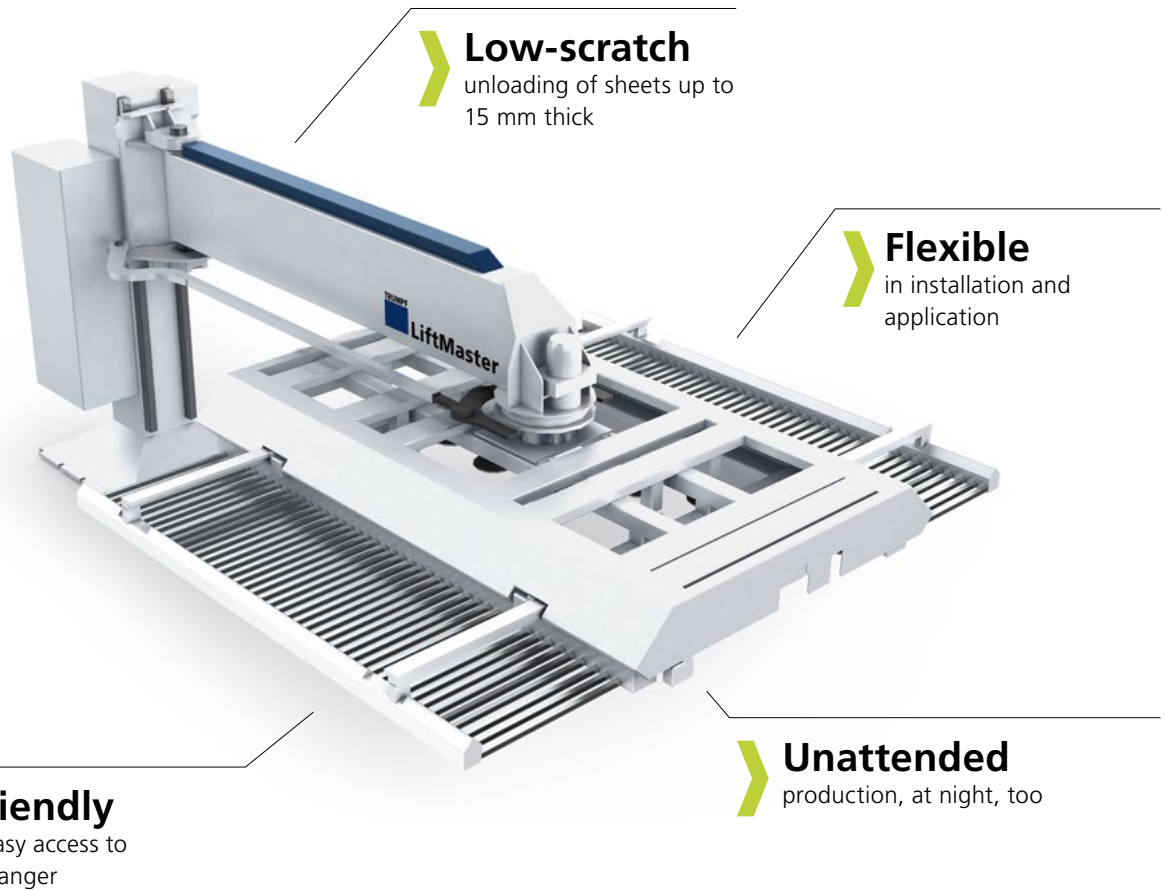
Technische Daten					
LoadMaster		Large format	Maximum format	Oversize format	
		1530	2040	2060	2560
For TruLaser machine(s)		1030 fiber	1040 fiber	1060 fiber	8000
		3030 3030 fiber	3040 3040 fiber	3060 3060 fiber	
		5030 5030 fiber	5040 5040 fiber	5060	
Max. sheet format	mm x mm	3000 x 1500	4000 x 2000	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

Content subject to change without notice. The information in our offer and our order confirmation is authoritative.

Flexible loading, unloading and sorting

LiftMaster



Low-scratch
unloading of sheets up to
15 mm thick

Flexible
in installation and
application

Unattended
production, at night, too

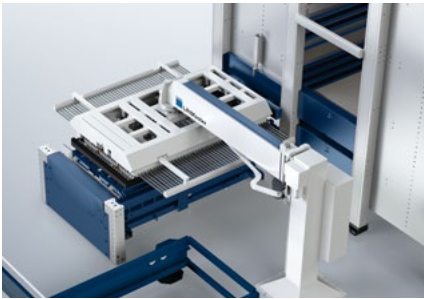
User-friendly
Quick and easy access to
the pallet changer

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.

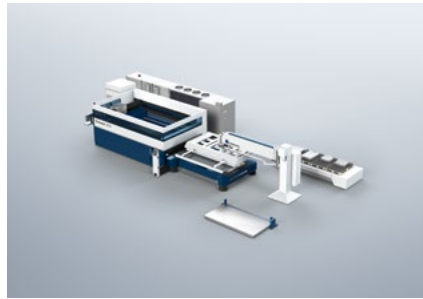
The swivel arm of the LiftMaster automatically adapts to the conditions on site. Consequently, you can flexibly manufacture and increase your productivity in the usual environment. With the proven TRUMPF suction frame plus unloading rake, you gain a reliable and, upon request, low-scratch system for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

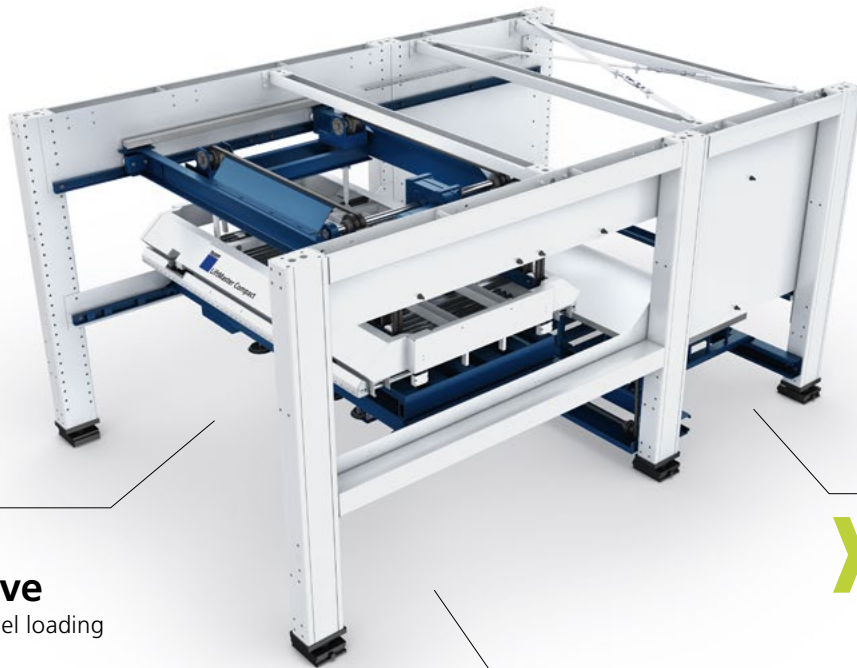
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Our best-in-class

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.



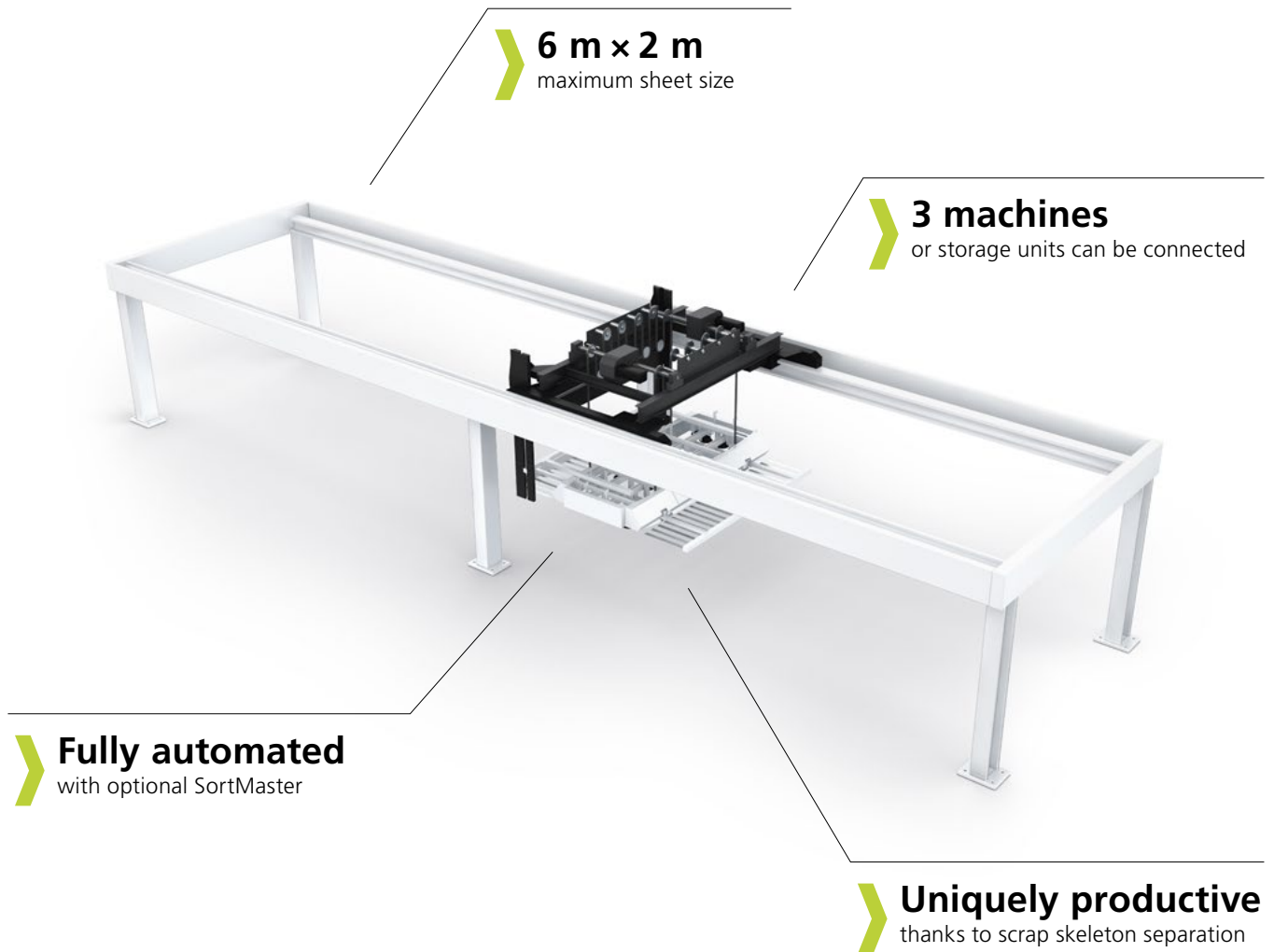
The addition of supplementary portal stations results in greater flexibility in the material flow.

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
Content subject to change without notice. The information in our offer and our order confirmation is authoritative.

The universal portal solution

LiftMaster Linear

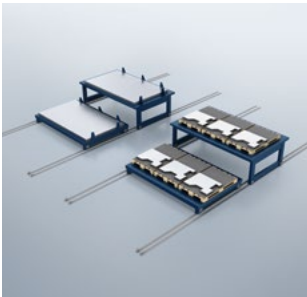


Using its linear axis, the LiftMaster Linear loads and unloads up to three machines at a maximum of six stations. At the stations, you can selectively integrate cart systems, machines, loading stations or unloading platforms.

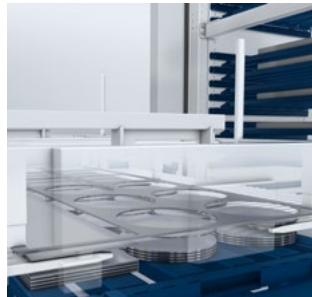
The versatile LiftMaster Linear can easily handle nearly any application. The sort extension(s) or scrap skeleton extension(s) separate the good parts from the scrap skeleton. Adding in the SortMaster gives you a fully automated, reliable, and stable processing cell in which the good parts can even be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

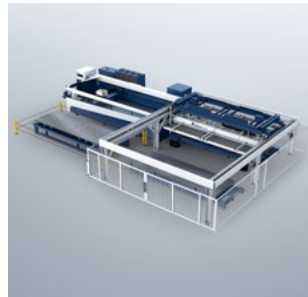
Norbert Gruhl, Head of Development – TruLaser Automation



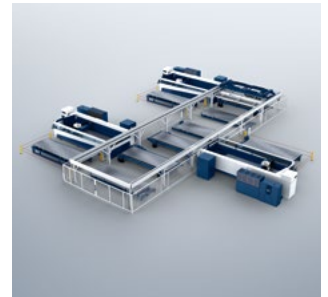
Simple connection of the machine to a raw material storage area for faster material supply.



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

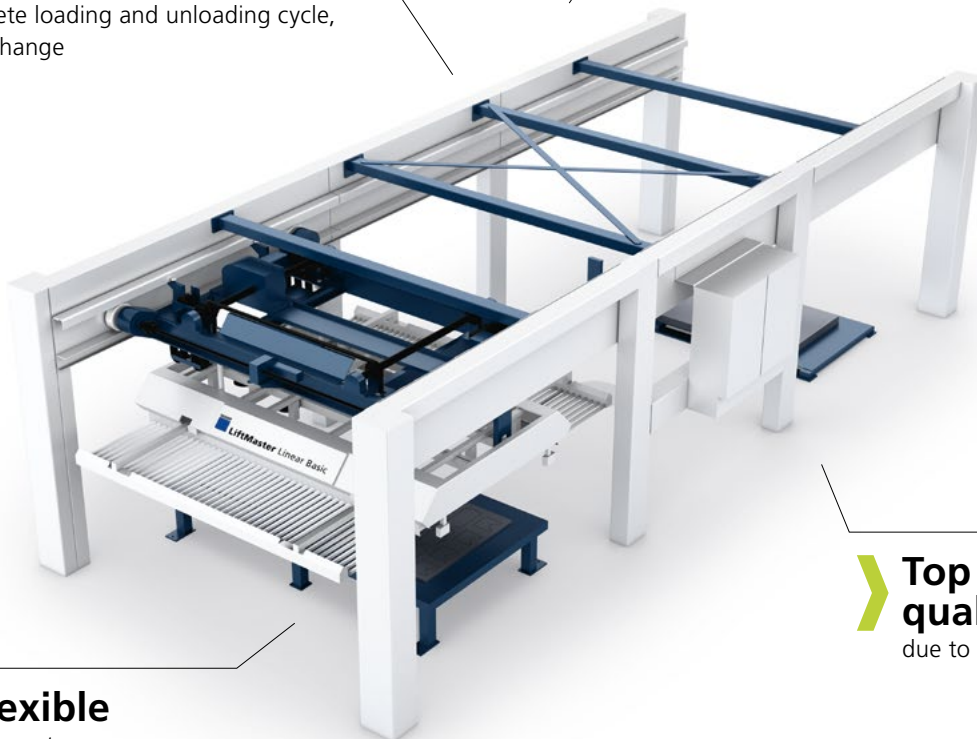
LiftMaster Linear Basic

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

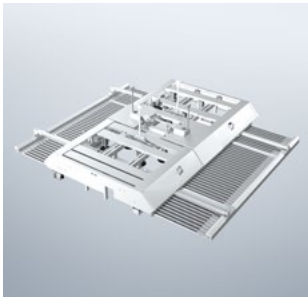


Simple, compact, reliable: The LiftMaster Linear Basic is a lean solution for the loading and unloading of sheets – one that offers optimum value for the money. Compared to the LiftMaster, it has a 15% smaller footprint. Cart systems enable an indirect connection to a storage system.

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.”

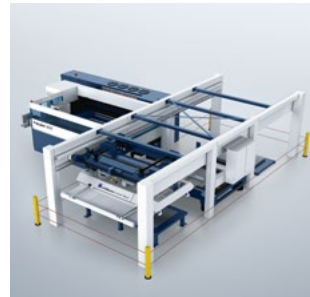
Patrick Bauer, Business Development Smart Factory Solutions



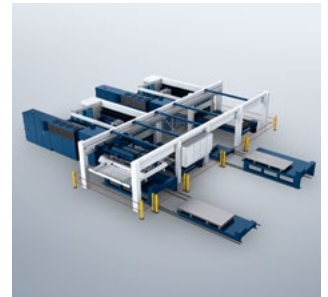
Reliable loading with the TRUMPF suction frame.



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/ujp6ni



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

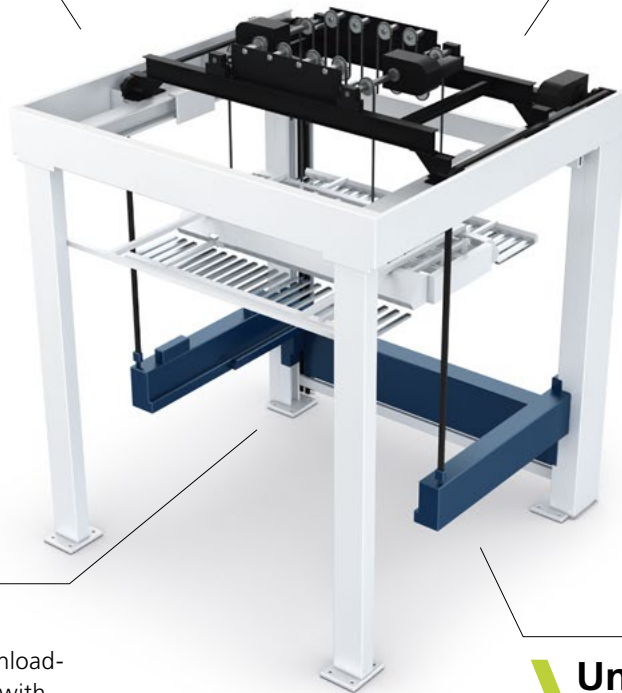
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The fastest connection to storage with multi-machine connection

LiftMaster Store and LiftMaster Store Linear

More productive
thanks to direct storage access

Expandable
to include the processing cell with TruStore and SortMaster

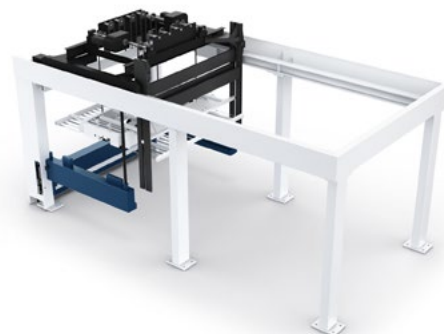


100 seconds
for a complete loading and unloading cycle, incl. pallet change, with the synchronous loader

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.

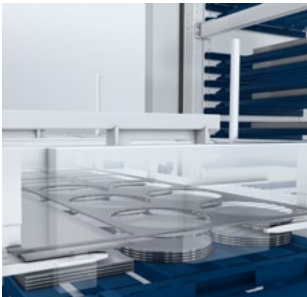
The LiftMaster Store derives its top performance from a variety of proven TRUMPF technologies. These include the suction frame with rake for reliable loading and unloading, as well as the synchronous loader to increase productivity. With its independent pallet lift, the LiftMaster Store is able to quickly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

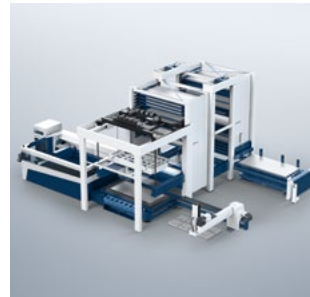
Mathis Schmidt, Development – TruLaser Automation



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/mkcpfs



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)

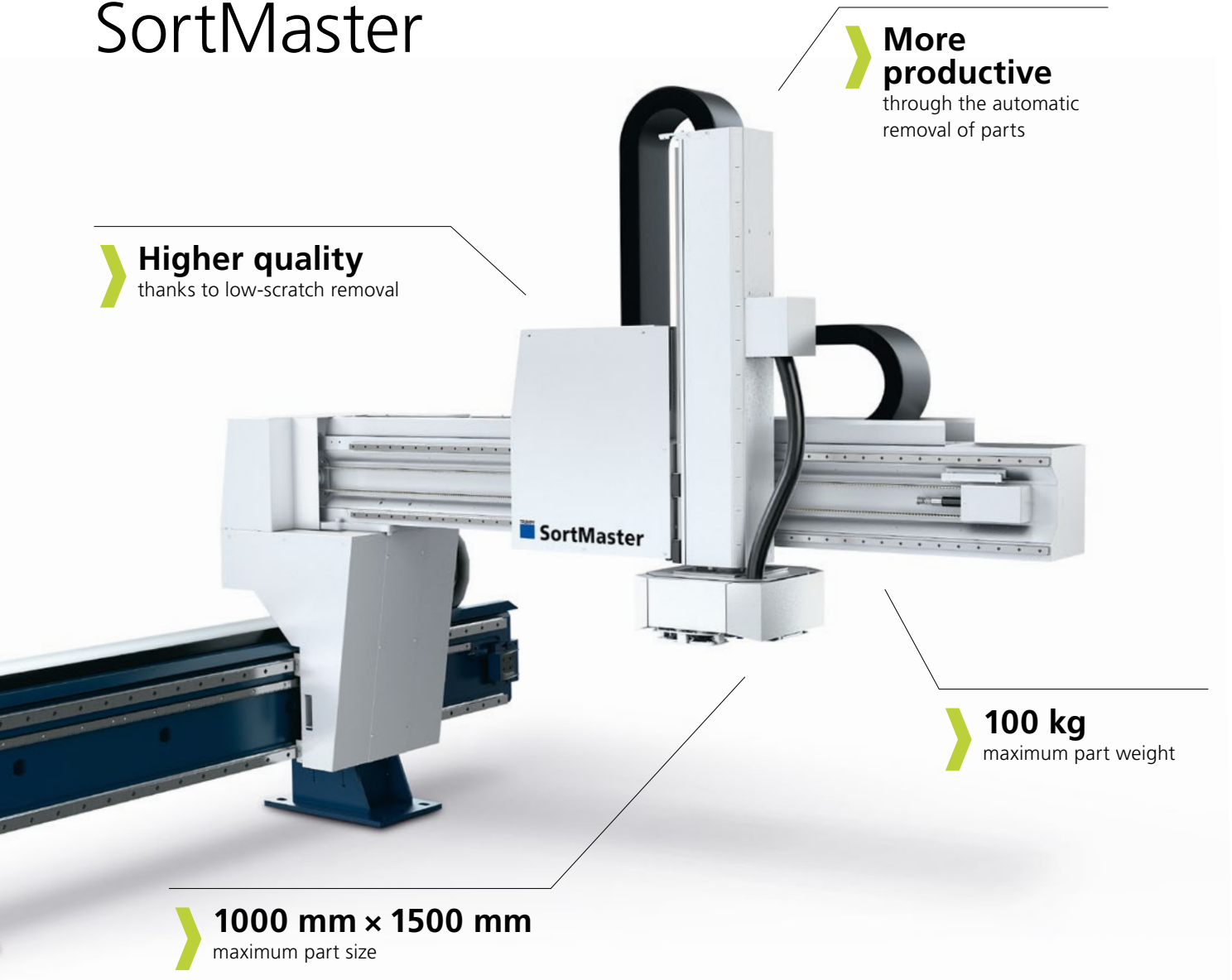
Mild steel rake for thick sheet metal handling		■ ■	□ □
Suction frame rake peeling equipment		■ ■	■ ■
SortMaster	R	□ □	□ □
Thin sheet separation	R	□ □	□ □
Part separation	R	□ □	□ □
Additional suction frame		□ □	□ □
Skeleton separation, for sheet thickness of up to 6 mm		□ □	- -
Synchronous loader		□ □	- -
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.”

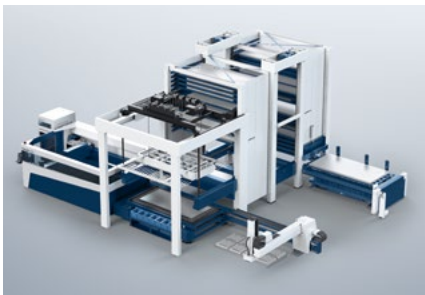
Daniel Peltier, HEIN Backöfen & Kältetechnik



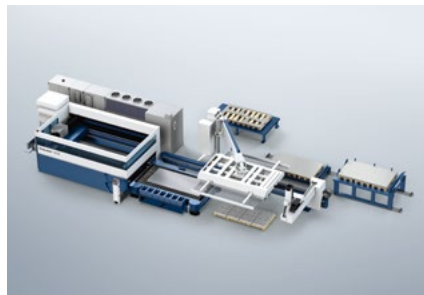
Smart functions: Monitoring of part separation and more effective separation of good parts from the scrap skeleton thanks to vibrating gripper head.



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/g72yzx



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

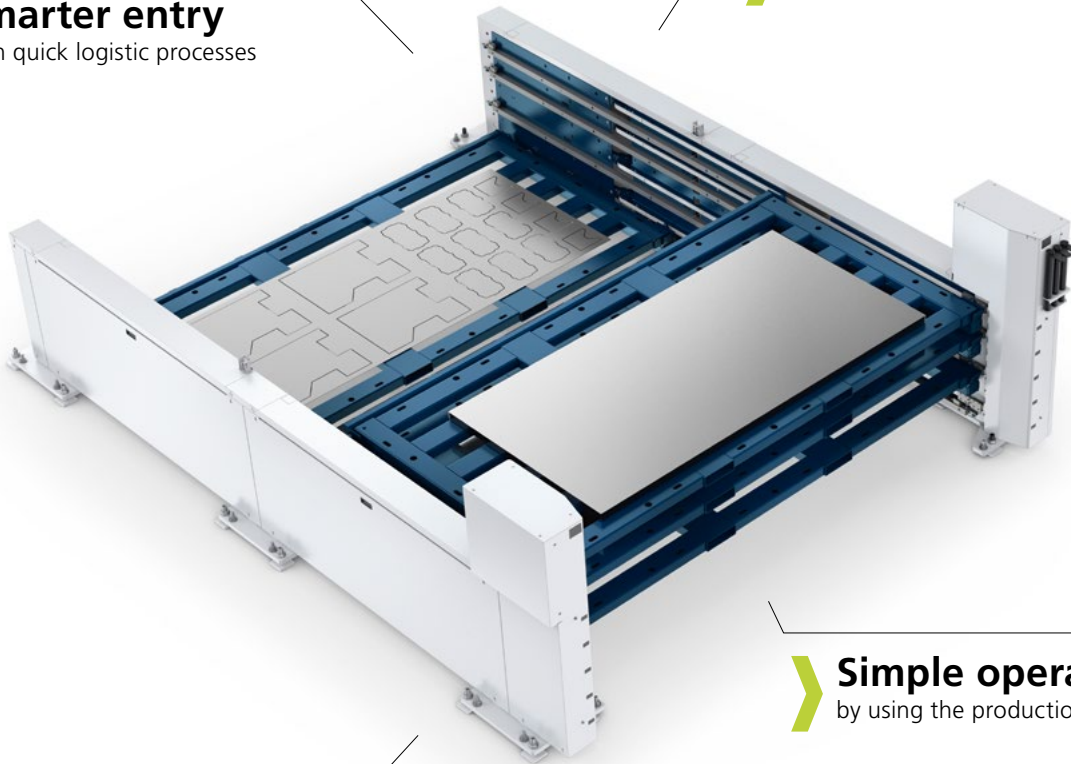
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Starting with unattended shifts

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.

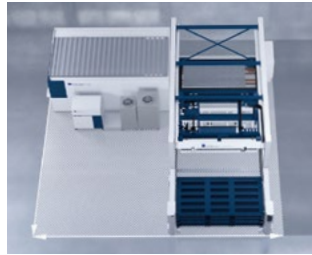
To make the transition to the automated production as easy as possible, TRUMPF offers a number of material buffers. With this choice, you can best exploit your potential and expand your production capacity in a way tailored to your own working processes. This is because the total cycle time in an automated 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	□

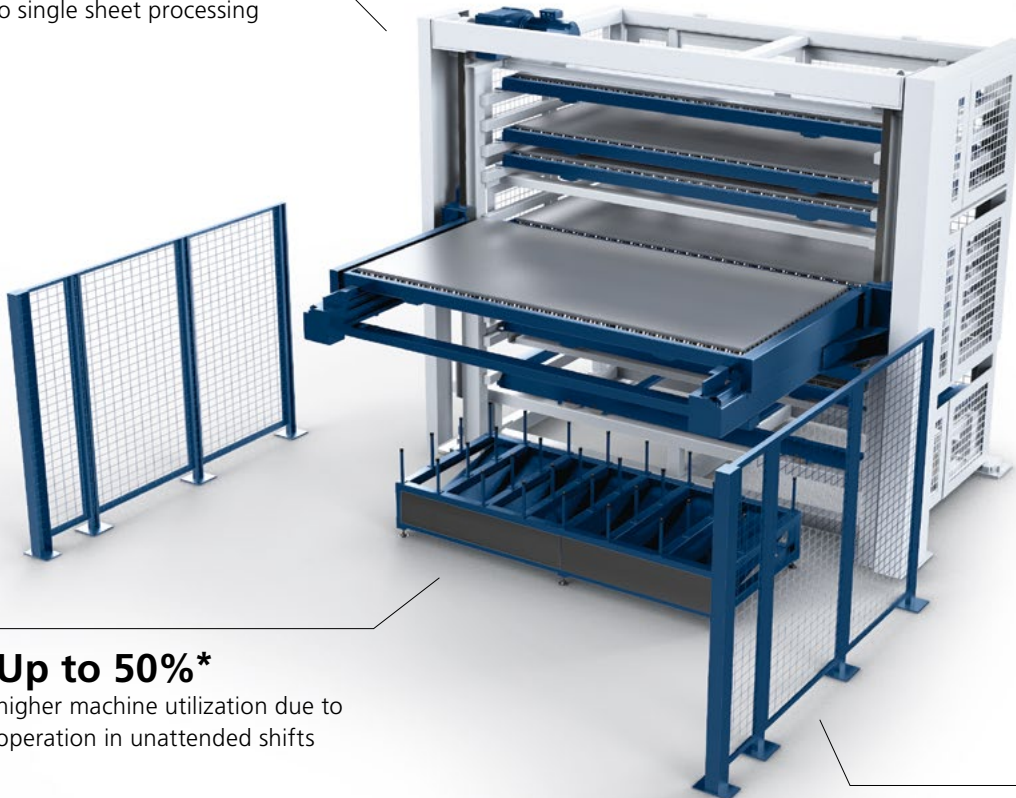
■ Standard □ Optional R Retrofit possible

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The multiple pallet changer

PalletMaster Tower

Higher quality
thanks to single sheet processing



Up to 50%*
higher machine utilization due to
operation in unattended shifts

Flexible
thanks to its large capacity

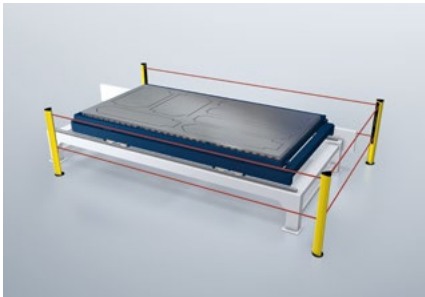
The PalletMaster Tower provides you with an affordable entry into unattended production. It combines the automated change of pallets with compact storage technology. It can store up to 20 pallets carrying different types of material and process them fully automatically. It uses a separate pallet for each metal sheet and plate.

The PalletMaster Tower changes thin sheets practically scratch-free and ensures that thick sheet metal can be processed without operator intervention for long periods. This saves both time and money.

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

“Flexibility and speed are our strengths. To be even better here, we are putting our faith in carefully planned automation. Augmented by the PalletMaster Tower, my TruLaser 3030 operates reliably around the clock. That’s what counts, in my book.”

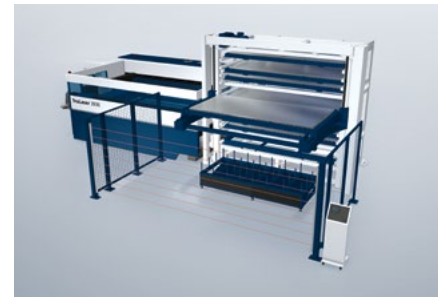
Ton Koridon, Koridon Industriële Plaatbewerking



Sorting and slat cleaning station: loading, unloading and cleaning parallel to production.



The sorting and slat cleaning station comes with the TruTool TSC 100 as a standard accessory.



TruLaser 3030 with PalletMaster Tower.



TruLaser 3030, with PalletMaster Tower and the sorting and slat cleaning station.




Experience the **PalletMaster Tower** in action:
www.trumpf.info/htweif



Technical data					
PalletMaster Tower		Large format			
		1530			
For TruLaser machine(s)		3030 3030 fiber 5030 5030 fiber			
Max. sheet format	mm × mm	3048 × 1524			
Sheet thickness	mm	0.8–25			
Max. pallet carrying capacity	kg	940			
System heights	mm	2787	3732	4878	6022
Number of pallets		6	10	15	20
Typical equipment					
Storage input output station					■
Pallet lift					■
Additional sorting and pallet cleaning station	R				□
Pallets with mild steel slats	R				□
Pallets with stainless steel slats					□

■ 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 _____ **38**
Loading of tubes and profiles

UNLOADING + SORTING

Part removal station _____ **40**
Gentle unloading and sorting

DISPOSAL

Scrap conveyor belt _____ **40**
Removal of scrap parallel to production

Loading of tubes and profiles

LoadMaster Tube

Intelligent
process management

Up to **9.2 m**
in tube length



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 four metric tons 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.



LoadMaster Tube on the TruLaser Tube 5000.



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



Experience the **LoadMaster Tube** in action:
www.trumpf.info/7pnskr



Technical data

LoadMaster Tube		TruLaser Tube 5000	TruLaser Tube 7000
Max. tube length for automatic loading	mm	6500 8000	6500 9200
Max. outer circle diameter	mm	152	204 254
Max. tube line weight	kg m	20	25 37.5
Max. tube weight	kg	120	150 225
Max. bundle weight	kg	4000	4000

Typical equipment

Automatic setup		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Conveyor system		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Low-scratch model	R	<input type="checkbox"/>	<input type="checkbox"/>
Tube diameter 15 mm	R	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Front attachment of LoadMaster Tube		<input type="checkbox"/>	<input type="checkbox"/>
Smart profile detection	R	<input type="checkbox"/>	<input type="checkbox"/>

■ Standard □ Optional R Retrofit possible

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Gentle unloading and sorting

Part-removal station and waste conveyor belt

Scrap disposal
parallel to production



Flexible
parts sorting

Protective
finished parts buffer

The TruLaser Tube part removal station takes special care when unloading your finished parts on conveyor tables, in wire mesh boxes or in containers. All components can be placed as desired.

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 into waiting boxes 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.”

Steinhart Metallwarenfabrik GmbH & Co. KG



Flexible parts sorting on the TruLaser Tube 7000.



TruLaser Tube 5000 with part removal station and waste conveyor belt.




Experience the
part-removal station
in action:
www.trumpf.info/tx071



Technical data			
Part removal station		TruLaser Tube 5000	TruLaser Tube 7000
Max. finished part length at part removal station	mm	3000 6500	3000 4500 6500
Max. finished part length at part removal station with optional finished length + 1.5 m	mm	4500 8000	4500 6000 8000
Max. outer circle diameter	mm	152	204 254
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 _____ **44**
Loading of raw materials, as well as the unloading and sorting of finished parts

LOADING + UNLOADING

Cart systems _____ **48**
Customized extension of the SheetMaster

SheetMaster Compact _____ **44**
A space-saving entry-level solution for loading and unloading of raw material, and unloading of microjoint sheets

PLACING OF SORTED FINISHED PARTS ON PALLETS

SortMaster Compact _____ **46**
SortMaster Compact sorts and loads finished parts onto the pallet

SortMaster Pallet _____ **48**
Place finished parts sorted on pallets

SortMaster Box _____ **50**
Unloading and sorting of finished parts

SortMaster Box Linear _____ **50**
Unloading and sorting of finished parts in linearly movable containers

DISPOSAL

GripMaster _____ **52**
Unloading of the scrap skeleton

ShearMaster _____ **52**
Cutting up of the scrap skeleton

DisposeMaster _____ **52**
Sorting of scrap

TOOL HANDLING

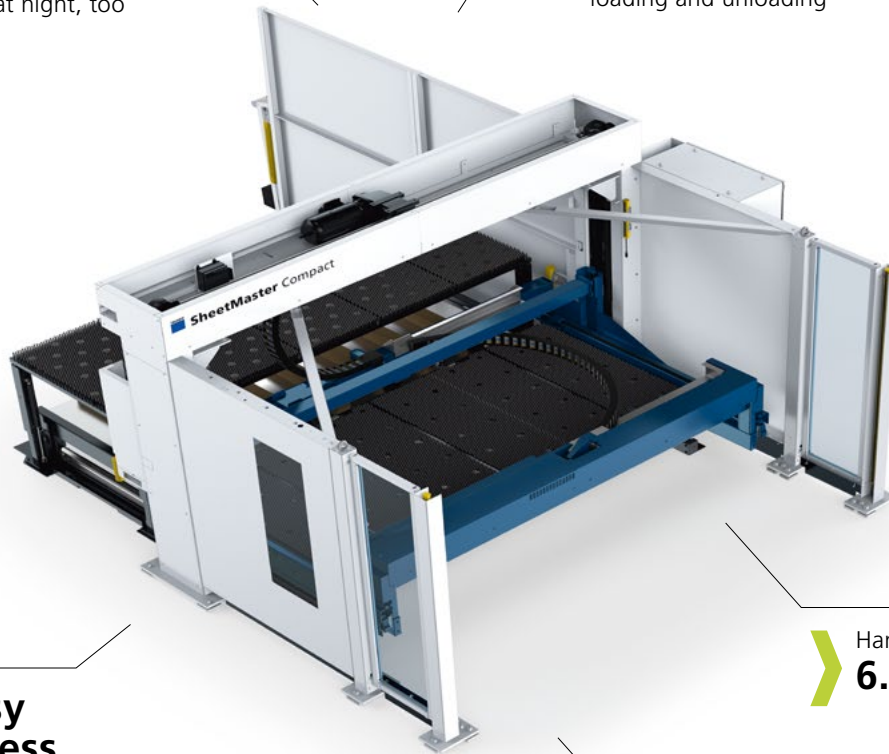
ToolMaster|ToolMaster Linear / integrated tool changer _____ **54**
Flexible tool systems

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

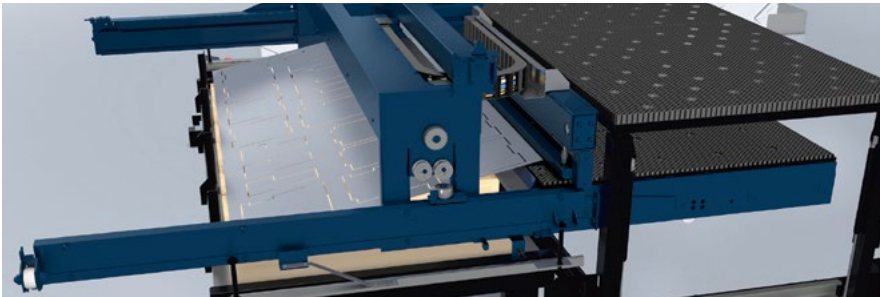
Loading and unloading
parallel to production

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.

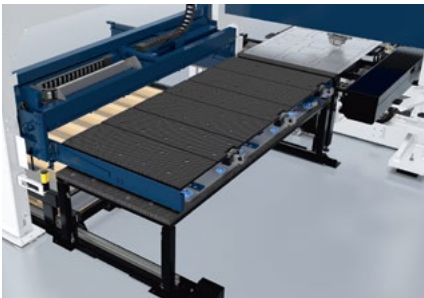
The synchronous unloading during production, means you can change material without interrupting the machine production cycle. Thus improving productivity even more.

“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.com/s/
sheetmaster-compact](http://www.trumpf.com/s/sheetmaster-compact)



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

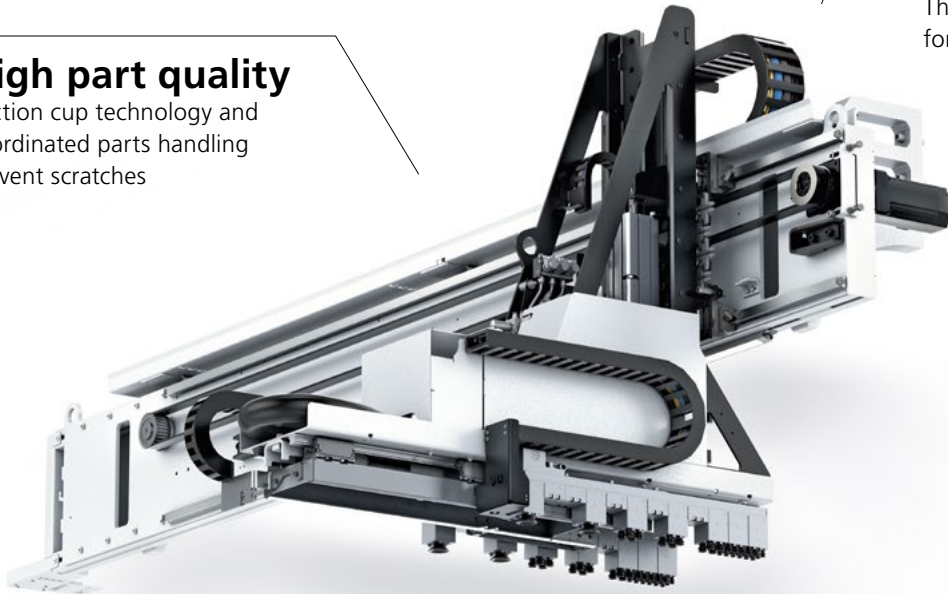
The parts are directly ready for further processing

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



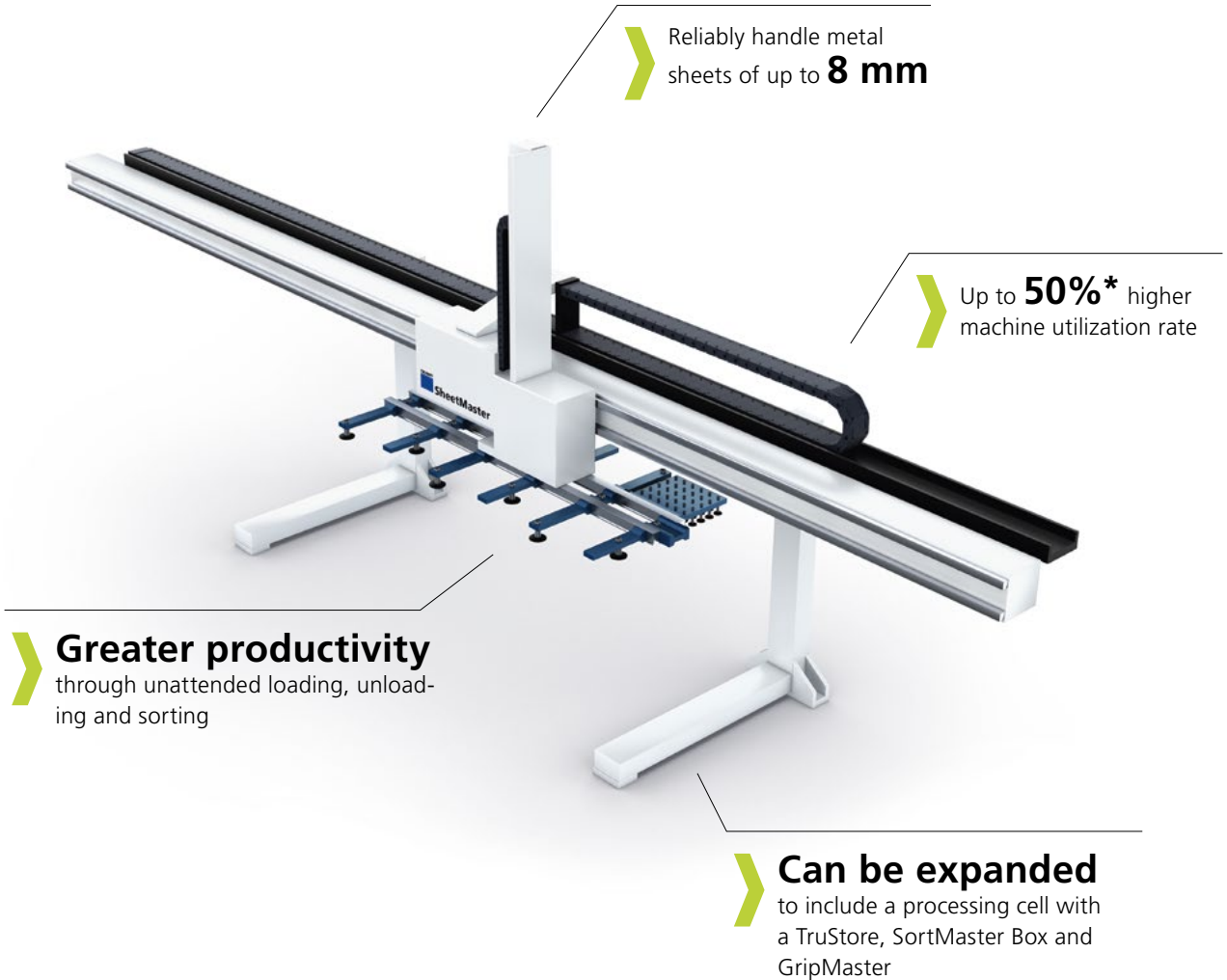
Technical data			
SortMaster Compact			
For TruPunch and TruMatic machine(s)		TruPunch 1000 TruPunch 3000 TruMatic 1000 fiber TruMatic 3000 fiber	
Min. part size (punching parts)	mm x mm	140 x 120	
Min. part size (laser parts)	mm x mm	70 x 30	
Max. part size	mm x mm	600 x 400	
Max. stack height	mm	250	
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.

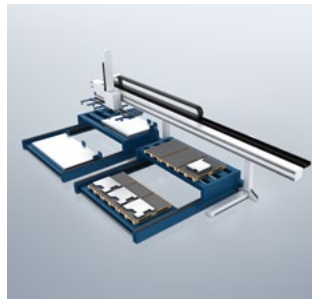
* Two shifts during the day, with an additional unattended shift at night.

“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.”

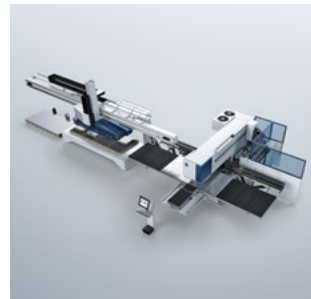
Michael Kohlmann, Regiolux GmbH



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	Oversize format	Medium format	Large format	Medium format	Large format	Oversize 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	□	□	□	□	□	□ □	□ □	□	□	□

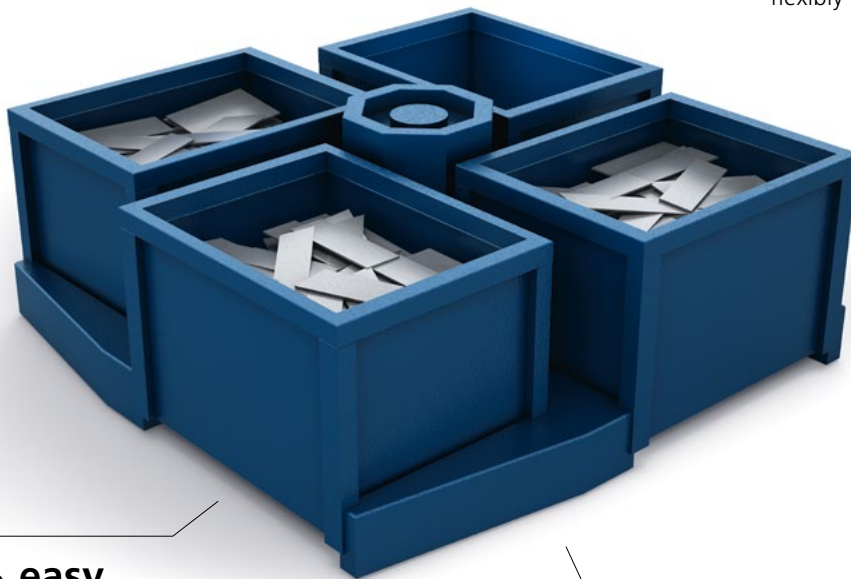
■ Standard □ Optional R Retrofit possible - Not available

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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

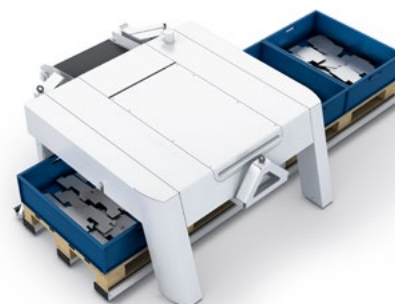


100% easy to integrate into intralogistics

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.

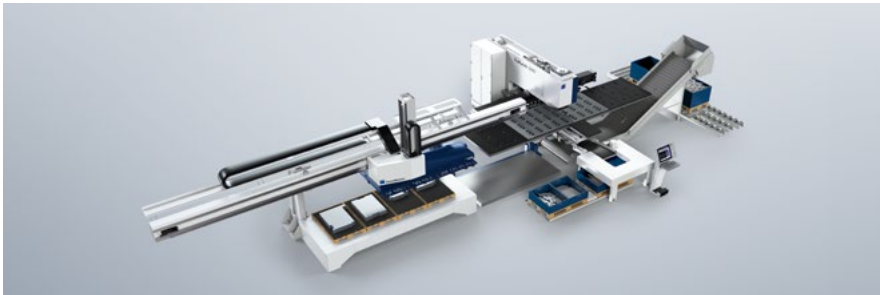
With the SortMaster Box, the containers are arranged in a carousel; with the SortMaster Box Linear, small parts fall into boxes that move along a line. Thanks to an additional conveyor belt and another part removal flap, the linear solution is particularly scratch-free. In both versions, the containers 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.

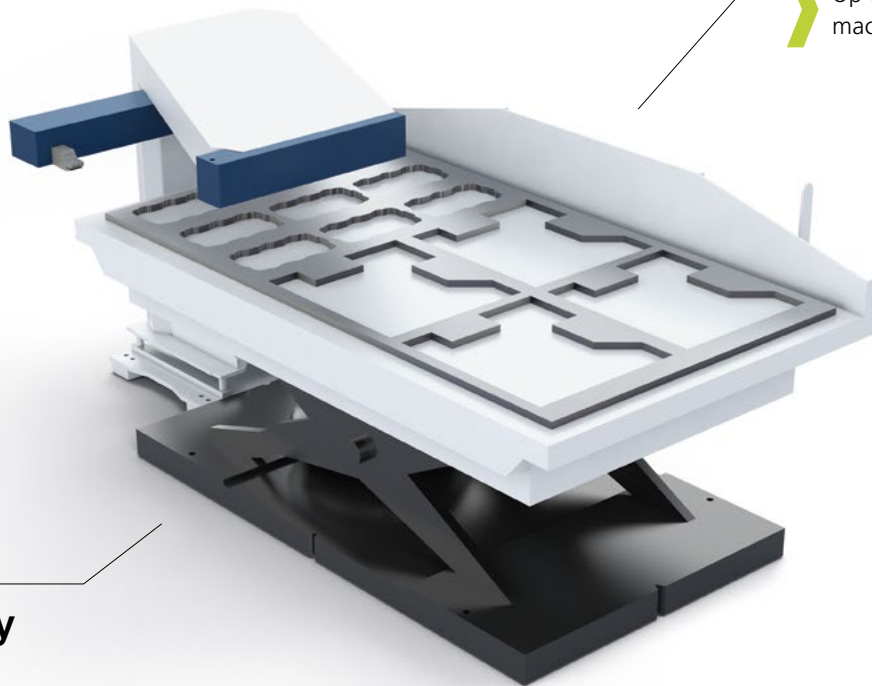
Technical data			
		SortMaster Box	SortMaster Box Linear
For TruPunch machine(s)		5000 ^[1]	3000
			5000
For TruMatic machine(s)		6000 6000 fiber (no oversize format)	–
		7000	
Max. part size (TruMatic 3000 fiber)	mm x mm	500 x 500 (300 x 500) ^[2]	500 x 500 (300 x 500) ^[2]
Max. number of boxes		4	4

^[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.

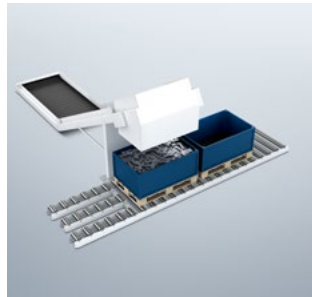
*Two shifts during the day, with an additional unattended night shift in combination with the SheetMaster.

“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.

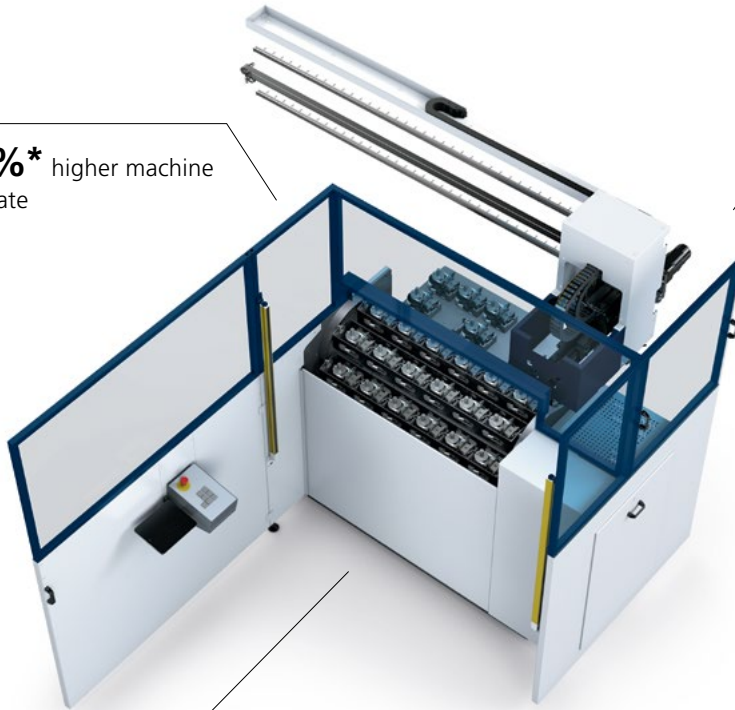
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Flexible tool systems

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.

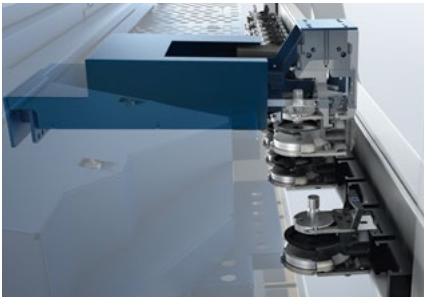


ToolMaster

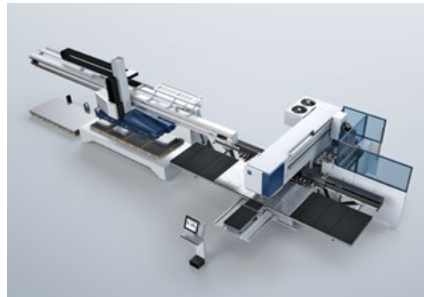
* Previously two shifts, plus an additional unattended shift using a ToolMaster, ToolMaster Linear and an integrated tool changer.

“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.

2D LASERS

LASER TUBE CUTTING

PUNCHING + PUNCH LASER

BENDING

STORAGE SYSTEM


SOFTWARE

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, Head of Development – TruBend

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 _____ **58**
The productive all-purpose bending cell

TruBend Cell 7000 _____ **60**
The innovative high-speed bending cell

TruBend Center 7030 _____ **62**
Full automatic panel bending

TOOL HANDLING

ToolMaster _____ **64**
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



Utmost **part precision**
with angle sensors

Flexibly **configurable**
to meet your needs

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.”

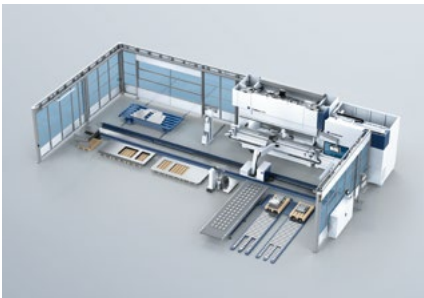
Dirk Matyssek, Matyssek Metalltechnik GmbH



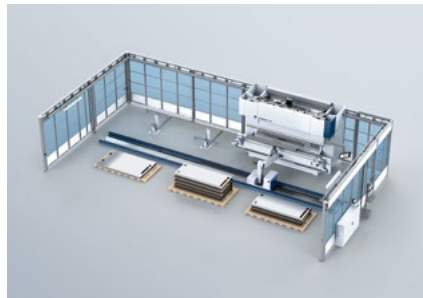
The mechanical gripper with transversing and rotary axes is highly productive when processing small parts.



Automatic tool changer ToolMaster.



TruBend 5320 with BendMaster (60), 12 or 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	6–14	6–16
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.”

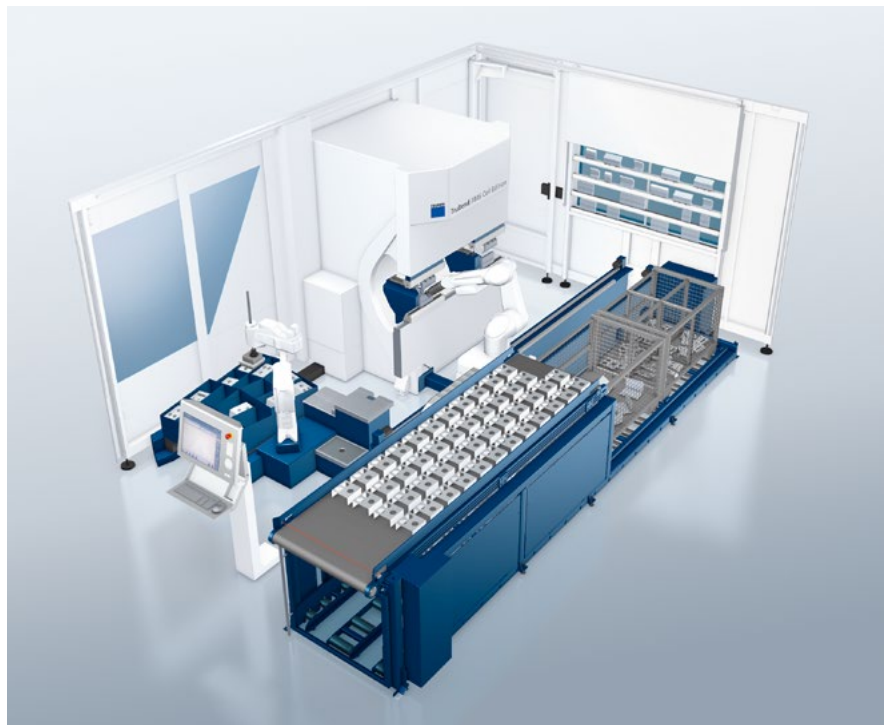
Manfred Wujesch, Wincor Nixdorf Manufacturing GmbH



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/hl7r9d



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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2D LASERS

LASER TUBE CUTTING

PUNCHING + PUNCH LASER

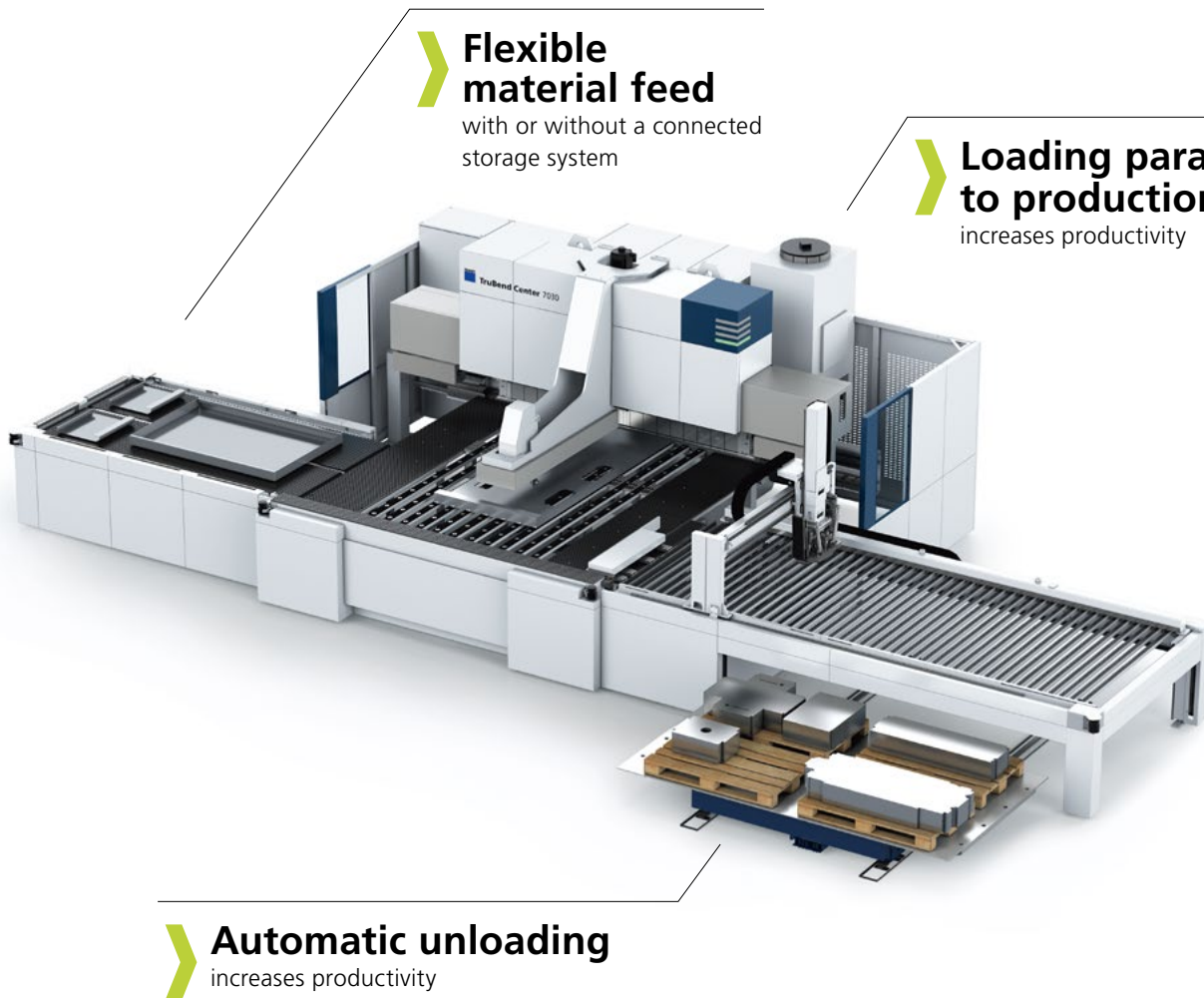
BENDING

STORAGE SYSTEM

SOFTWARE

Fully automatic panel bending

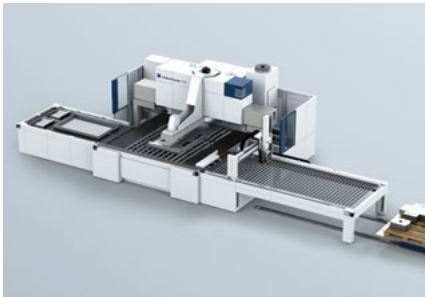
TruBend Center 7030



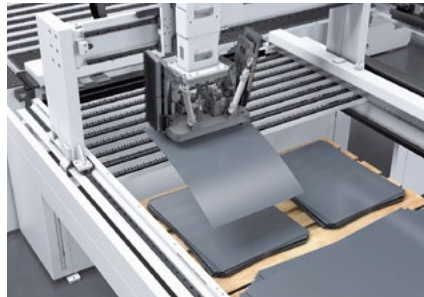
With the right automation, your TruBend Center 7030 loads and unloads by itself. On the loading side, the loading unit picks up the blanks parallel to production and guides them to the processing step. Material flow and accessibility are optimized by using the loading cart where you can simply place 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.”

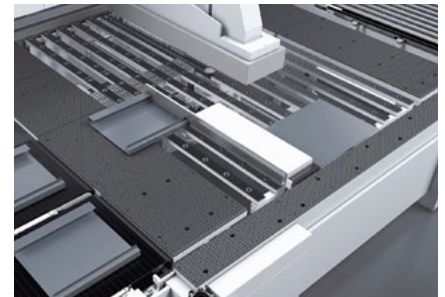
Jürgen Bickel, Managing Director, Bickel Blechtechnik



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](http://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

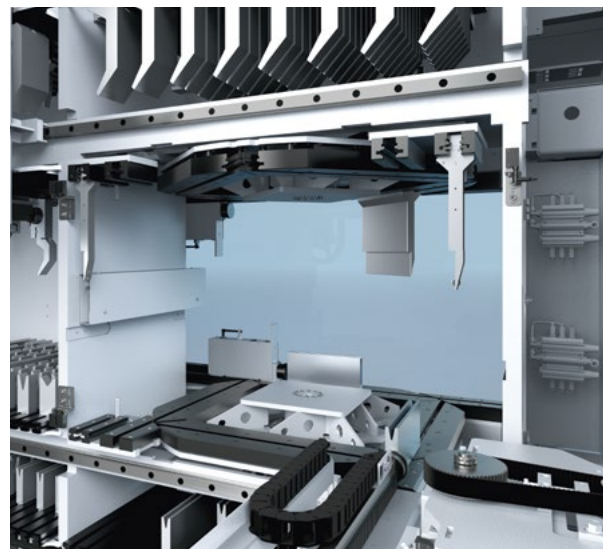
Retooling a bending machine during each program change is laborious. The ToolMaster carries out these setup operations for you. A door allows you to load it parallel to production, it uses standard tools, ACB tools, tools with adapters, and has on average space for up to 65 m of tools. Not only do you 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.”

Patrick Bauer, 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

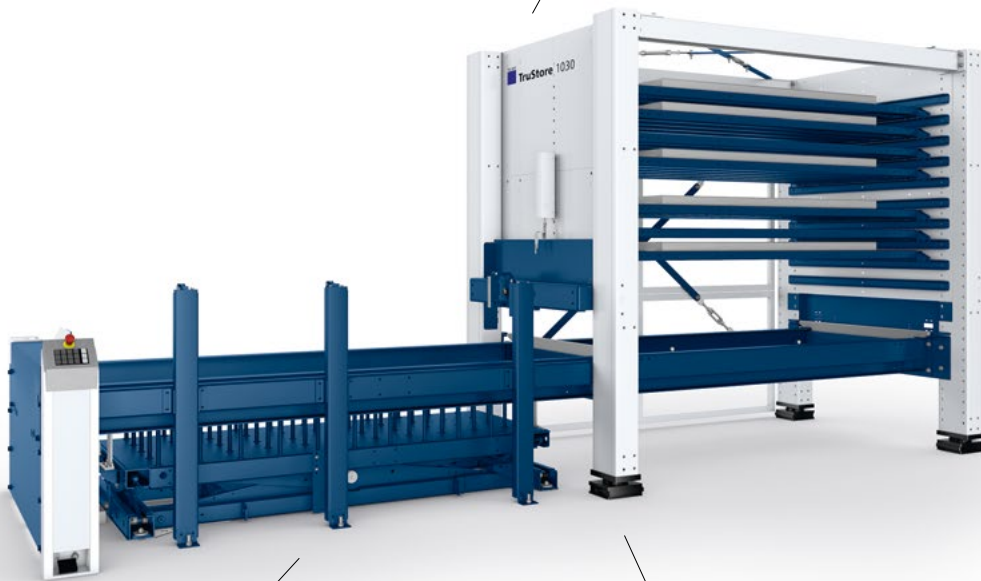
TruStore Series 1000 _____ **68**
Practical entry-level store

TruStore Series 3000 _____ **70**
The most flexible storage system

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

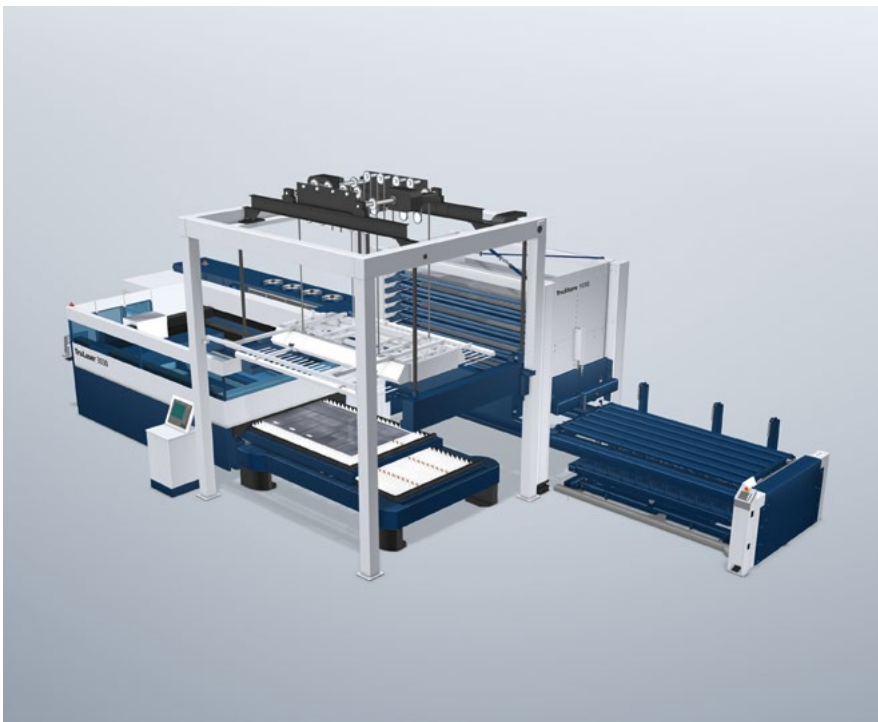
The reliable and economical compact store facilitates material handling and offers you the perfect entry into TRUMPF storage technology.

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/mujwqp



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

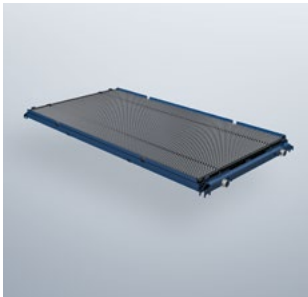
The dynamic compact storage system grows with your requirements, reduces space requirements and can be expanded to a fully automatic system.

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.”

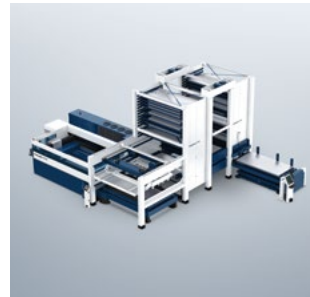
Vit Suchomel, Head of Development TruStore, TRUMPF Liberec



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/mujwqp



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 height per pallet	mm	90 260	90 260
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	R	■	■
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.

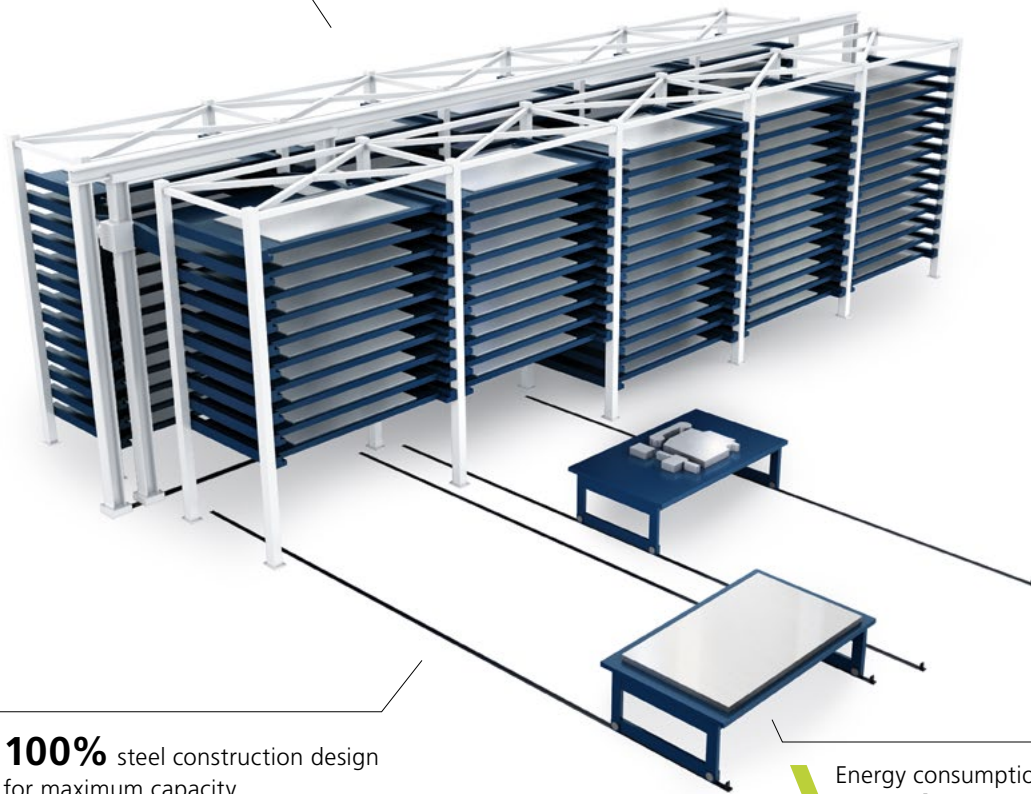
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Utmost efficiency for your manufacturing operations

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

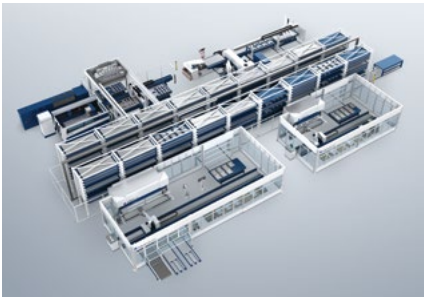
STOPA large-scale storage systems are more than just material stores – they take on the comprehensive tasks of a logistics center for your production setup.

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/29chqt



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.

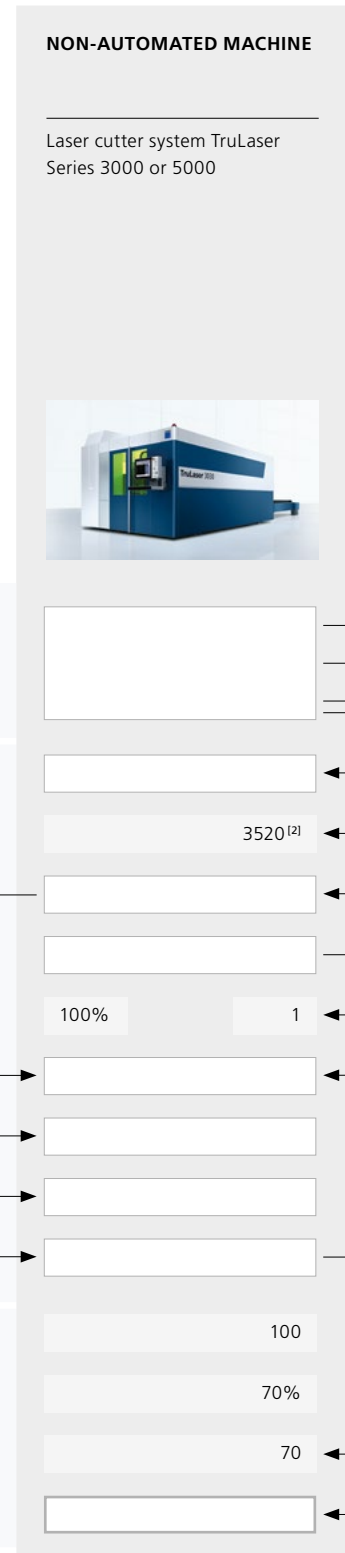
Content subject to change without notice. The information in our offer and our order confirmation is authoritative.

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.



INVESTMENT	Total delivery value incl. freight, training, software
COO	Typical service life in years ^[1] Operating hours per year (example) 3520 ^[2] System costs per hour Employee costs per hour Percentage/number of employees per machine 100% 1 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
PART COSTS	Productivity (quantity of parts produced) per hour – theoretical 100 Degree utilization of the system (through material flow) – actual ^[5] 70% Productivity in units – actual 70 Production costs per sample workpiece

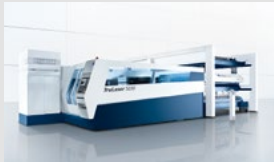
^[1] Usually the useful life of a storage system is longer than that of machines, therefore the actual production costs should be rated lower.

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

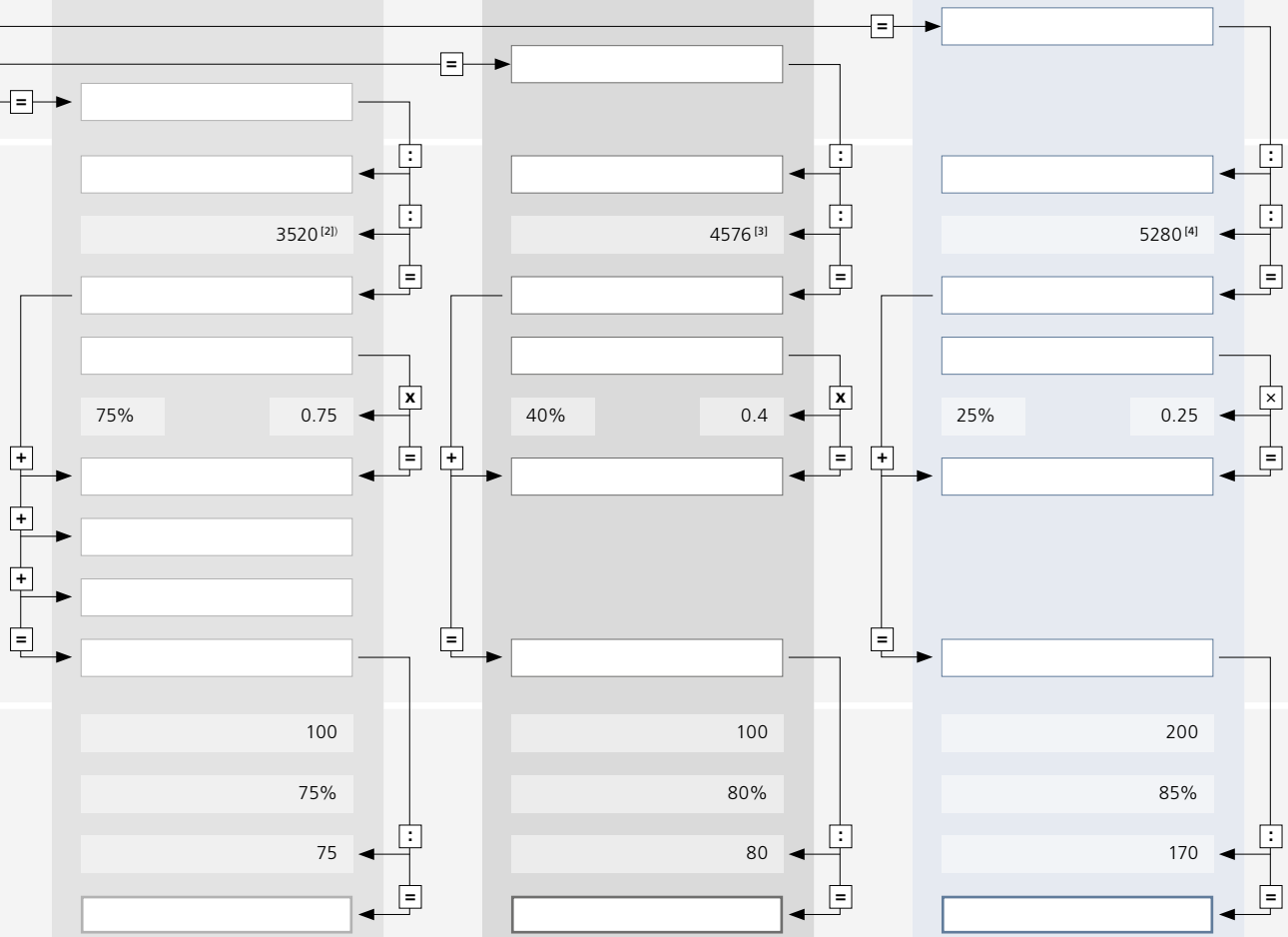


FULLY AUTOMATED MANUFACTURING IN ALL PROCESSES

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

^[3] 3 shifts at 220 workdays per year

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

^[4] 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

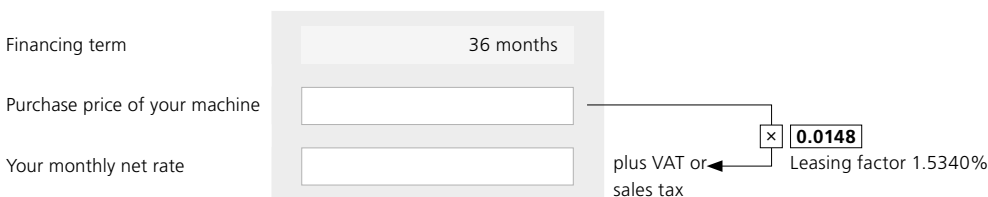
You can use first-class solutions at attractive terms and conditions, and with the usual TRUMPF quality. Additionally, you get a clear basis for calculation and can increase your financial flexibility.

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 which are suitable for industry and absolutely reliable. We put everything we've got into giving you a compelling and competitive edge – expertise, experience, and a lot of passion.

Industry 4.0 – solutions to safeguard your future

The fourth industrial revolution is changing the manufacturing world. How can you stay competitive internationally? Benefit from the opportunities digital networking can present: we accompany you step by step on the way to your networked production with pragmatic solutions, and help you to make your processes more transparent, more flexible and, above all, more economical. In this way you can make full use of your resources and set up your production for the future.

TruConnect is synonymous with Industry 4.0 at TRUMPF. The range of solutions links man and machine with information. It covers all steps in the production process – from the offer right through to the shipping of your parts.



TruConnect
Your Smart Factory



Visit us on YouTube:
www.youtube.com/TRUMPFtube



Lasers for manufacturing technology

Whether on a macro, micro, or nano level – we have the right laser and the right technology to produce innovatively and cost-efficiently in every industrial application. Beyond the technology itself, we support you with system solutions, application knowledge, and consulting.



Power supplies for high-tech processes

From semi-conductor manufacturing to solar cell production – with our RF and MF generators, the current for induction heating, plasma and laser excitation is given a defined frequency and power – with high reliability and repeatability.

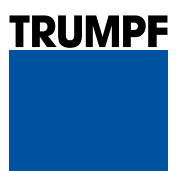


Machine tools for flexible sheet metal and tube processing

Whether it's laser cutting, punching, bending, or laser welding – we offer tailor-made machines and automation solutions, including consulting, software, and services for all processes in flexible sheet metal processing – so you can reliably manufacture your products to exacting quality standards.



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



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