



**TRUMPF**



Laser systems

The answer  
to your  
manufacturing  
needs

# The perfect solution

Thousands of satisfied customers place their trust in machinery made by the world's leading technologist in laser material processing. Laser systems from TRUMPF give you the security of knowing you have chosen a highly flexible and extremely productive solution for your processing needs. We will support you every step of the way, from developing your application to choosing the right technology, components, and software, we offer comprehensive after-sales services. Together we can boost your productivity!

As your industry partner, we want to share our expertise with you.

In good hands no matter  
what industry  
4 – 7

In our Laser Application Centers, we will work with you to develop your process right from the very beginning.

We can help you  
rise to the challenge  
8 – 9

TRUMPF delivers complete solutions.

Everything from a single  
source  
10 – 11

We offer diverse solutions for a variety of tasks, and together, we will find the right one for your production line.

**Your application,  
our technologies**  
12 – 13

Our services provide the best conditions for a successful production.

**Condition-based Services**  
14 – 15

Find out more about our product portfolio here.

**The answer to your  
manufacturing needs**  
16 – 39

Our comprehensive services and unwavering support will give you a competitive advantage.

**TruServices.  
Your Partner in Performance**  
40 – 41

All the technical information you need at a glance.

**Technical data**  
42 – 45

# In good hands no matter what industry

What drives you drives us too. For many decades now, we have been offering customers from a wide range of industries help and advice on using laser technology. The knowledge we have acquired over this time gives us an edge that we pass on to you; you can expect technology that is both state of the art and tailored to the specific needs of your industry. TRUMPF is always at the forefront of the latest trends, and is continually investing in the research and development of new technologies and potential applications to ensure we maintain this leading position in the future.

## Anywhere and everywhere

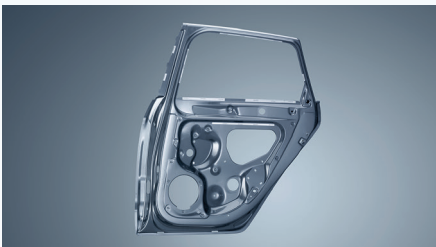
Laser material processing has been an integral part of numerous vehicle sub-assemblies for many years now. Almost every component, from the drivetrain to custom accessories, has had a laser involved in its manufacture.



See the versatility that working with laser tools offers across all industries:  
[www.trumpf.com/s/kecj9f](http://www.trumpf.com/s/kecj9f)

## Automotive industry

Laser technology has been a part of contemporary car manufacturing for many years now. Automotive is a global industry, and TRUMPF is a global company; Customers around the world can rely on premium service, high spare parts availability, and an expert team of industry managers and product managers who are supported by sales staff with encyclopedic knowledge of products and industries. Our industry expertise has been acquired over decades and will take your production process to the next level.



### Body in white

Working on the body of a vehicle requires maximum speed and flexibility at all times. Our laser systems enable you to process even contemporary aluminum alloys and hot-formed steel in a highly productive manner. TRUMPF offers innovative, tried-and-tested solutions for welding, cutting, removing excess material (LBM), soldering and glue priming that you can rely on.



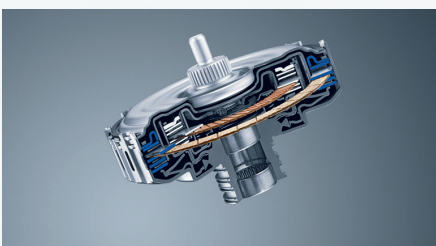
### Electromobility

Use highly compact structures and benefit from new joint geometries for electrically conductive metals and fast welding of battery components, with minimal spatter formation and very little heat generation.



### Lightweight construction

Laser technology can open the door to modern-day lightweight construction, enabling you to process press-hardened steels, aluminum alloys, fiber-reinforced materials and ultralight steel grades, such as Usibor, in a cost-effective way. Lasers make it possible to use entirely new types of lightweight construction, such as intelligent structures or 3D-printed components, which will result in significant improvements to your product.



### Powertrain

With a quiet, spatter free process and deep, flawless, long lasting seams that can withstand harsh conditions, TRUMPF's state of the art technology can properly machine your drive components.

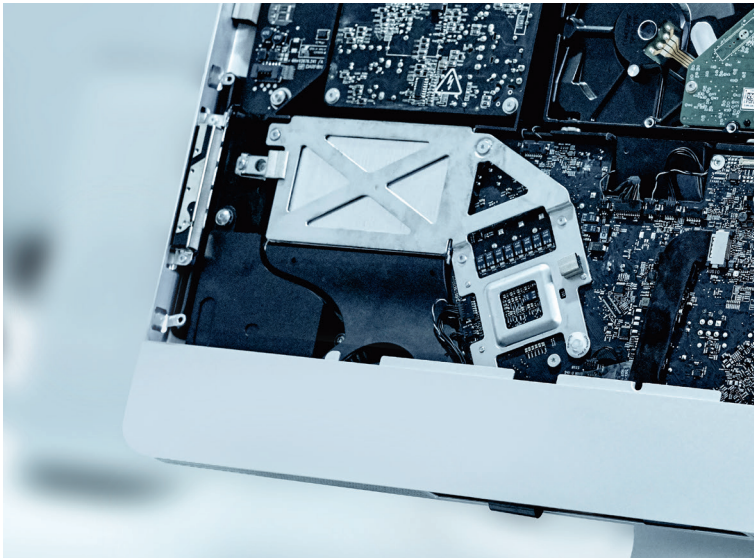
## Medical engineering

Reliable processes are extremely important in medical engineering, and with TRUMPF you can count on ultraprecise, reproducible results without the need for rework, plus highly flexible production from batch size 1. The laser light works contactlessly, meaning that sterility is assured at all times. Laser marking ensures traceability in accordance with UDI standards, while 3D printing offers maximum customization of artificial hips or dentures.



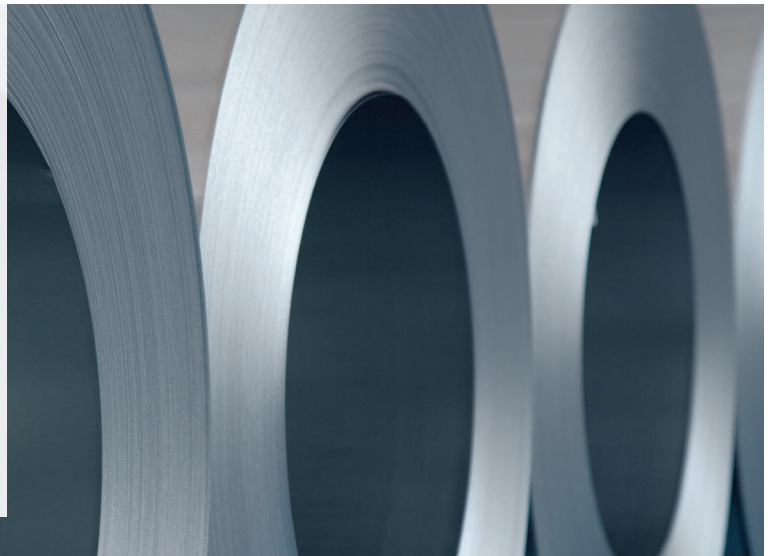
## Electrics/electronics

Fast processes in fully automated production lines, high-precision processing and minimal exposure to heat for your workpiece: Laser systems from TRUMPF make achieving these things effortless. A laser also enables you to engrave an extremely high number of sensitive electronic components at the same time – without contact and free from wear.



## Sheet metal working

Sheet metal working requires speed and flexibility. TRUMPF laser systems enable you to quickly and easily carry out retooling, welding, cutting, and deposition welding with a single machine, while also offering fast processing, an intuitive operating concept and assistance with application development.





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## Utility vehicles and transportation

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Modern laser machines are consistent, reliable and bring down the cost per part in processes such as welding or laser cutting hot-formed parts. Procedures such as laser deposition welding help to repair components cost-effectively instead of having to replace them. TRUMPF is a dependable partner for automatable solutions in this regard.

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## Aviation and aerospace industries

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From expensive certification processes and premium part quality to reliable reproducibility, the demands made in the aviation and aerospace industries are enormous. With engineering from TRUMPF, you can ensure you will meet and exceed these demands. We offer cutting-edge technologies such as laser deposition welding and 3D printing to the highest standards, and we are here to help you with our global service team.



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## Science

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Are you conducting research into the properties of new or unusual materials? Or perhaps you're developing processing strategies for the industrial production line of the future? TRUMPF is helping numerous universities and institutions to acquire new knowledge through the use of our state-of-the-art laser systems that are reliable and offer flexible parameterization.

# We can help you rise to the challenge

Whether you know exactly what you need or you're looking for a custom solution, we will be there for you every step of the way. We are fascinated by lasers and all the possibilities they offer. In our Laser Application Centers (LAC) we are ready and waiting to assist you – no matter when, no matter where. This is because we aim to be the right partner in the right place who always has the right technologies for your needs.

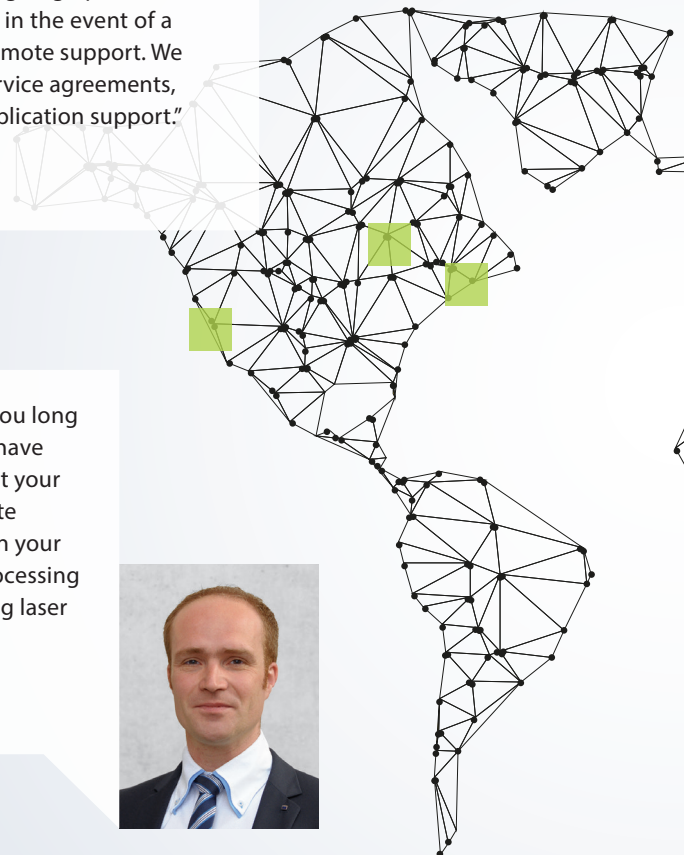


"With our tailored service packages, we support you in ongoing operation. Our Condition-based Services offer full transparency, and in the event of a malfunction, quick and straightforward assistance with remote support. We also offer comprehensive support through appropriate service agreements, training, and product enhancements, as well as on-site application support."

Bastian Becker, Head of Services Sales, Ditzingen, Germany

"With our unique industry management concept, we start assisting you long before you actually put a laser to work in your production line. You have our expert team of automotive specialists and product developers at your disposal throughout this process. We work together with you to create custom solutions that exploit the full potential of laser technology in your production plant, whether that means developing equipment for processing high-strength materials, designing laser-friendly components or using laser soldering."

Marc Kirchhoff, Automotive Team Leader, Ditzingen





“TRUMPF helped us enter the market for 3D cutting high-strength steel grades. We received so many orders we soon had to purchase a second laser system.”

Gerardo Oaxaca, CEO of Superlaser & Fixtures, Puebla



Photo: Adam Wiseman

“TRUMPF’s technical expertise helped us finally find an automatable laser cutting solution. It’s done away with the need for two out of three work steps. Plus we can react more quickly to design changes in manufacture.”

Ulrich Nieweg, Head of Prefabrication/Tool Making at Zwilling J. A. Henckels AG, Solingen



Photo: Ralf Kreuels

“The variety of applications in laser technology is growing all the time. If you’re looking for the right laser to meet your processing needs, you’re in the right place in one of our LACs. Our experts around the world can use your requirements to select the right combination of laser beam source, optical components, and process parameters for you. My top priority is for you to be satisfied with the results.”

Florian Kiefer, team leader at Laser Application Center, Plymouth, Michigan, USA



Find out more about how we can help you at our Laser Application Centers here:  
[www.trumpf.com/s/7smpvy](http://www.trumpf.com/s/7smpvy)

# Everything from a single source

TRUMPF gives you the security of knowing you have chosen a sophisticated and proven solution for your manufacturing system. Our various components, all of which we make ourselves, and our fully comprehensive global service make us a reliable partner for your production needs. You will also benefit from our knowledge of key issues for the future, such as Industry 4.0 and additive manufacturing.

## Everything for your machine

- Machine
- Laser
- Procedure-specific processing optics
- Sensor technology
- Software
- Custom solutions



## Everything for your manufacturing processes

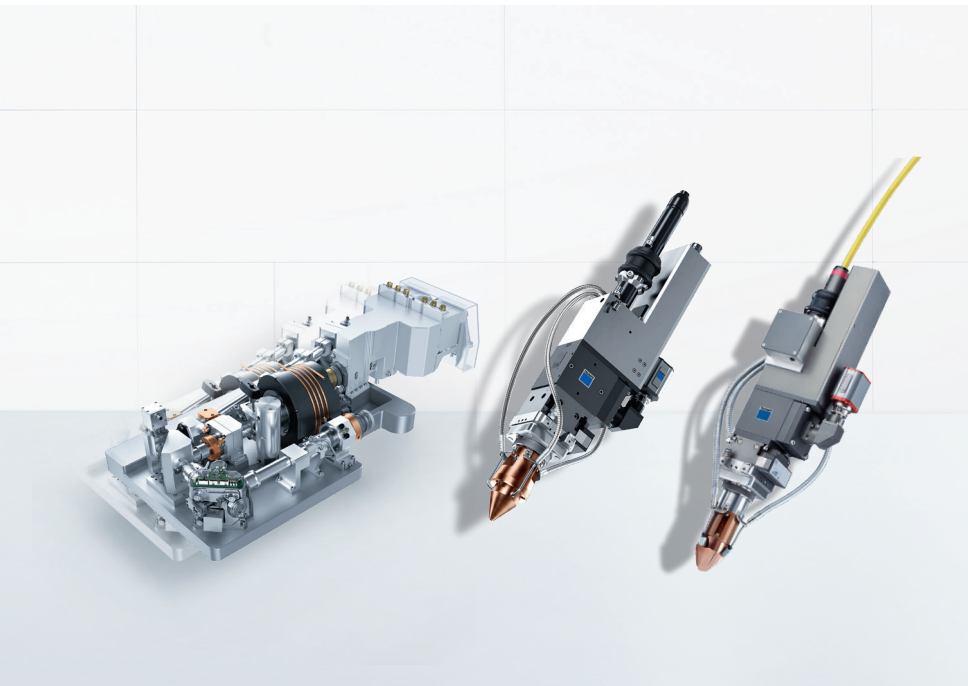
- Automation solutions
- Construction of jigs and fixtures
- Part and powder management in additive manufacturing
- Laser network





## Why choose TRUMPF laser systems?

- 1 Tailored solutions
- 2 Optimal for large-scale production and batch size 1
- 3 Consistently high component quality
- 4 Virtually warp-free processing
- 5 Highly precise results
- 6 No reworking needed
- 7 Maximum productivity minimizes cycle times
- 8 Process flexibility (cutting, welding, LMD)
- 9 Extremely robust and reliable
- 10 Maximum machine availability



### TruServices. Your partner in performance

Worldwide technical service  
Functional enhancements  
Monitoring and analysis  
Training  
Application advice



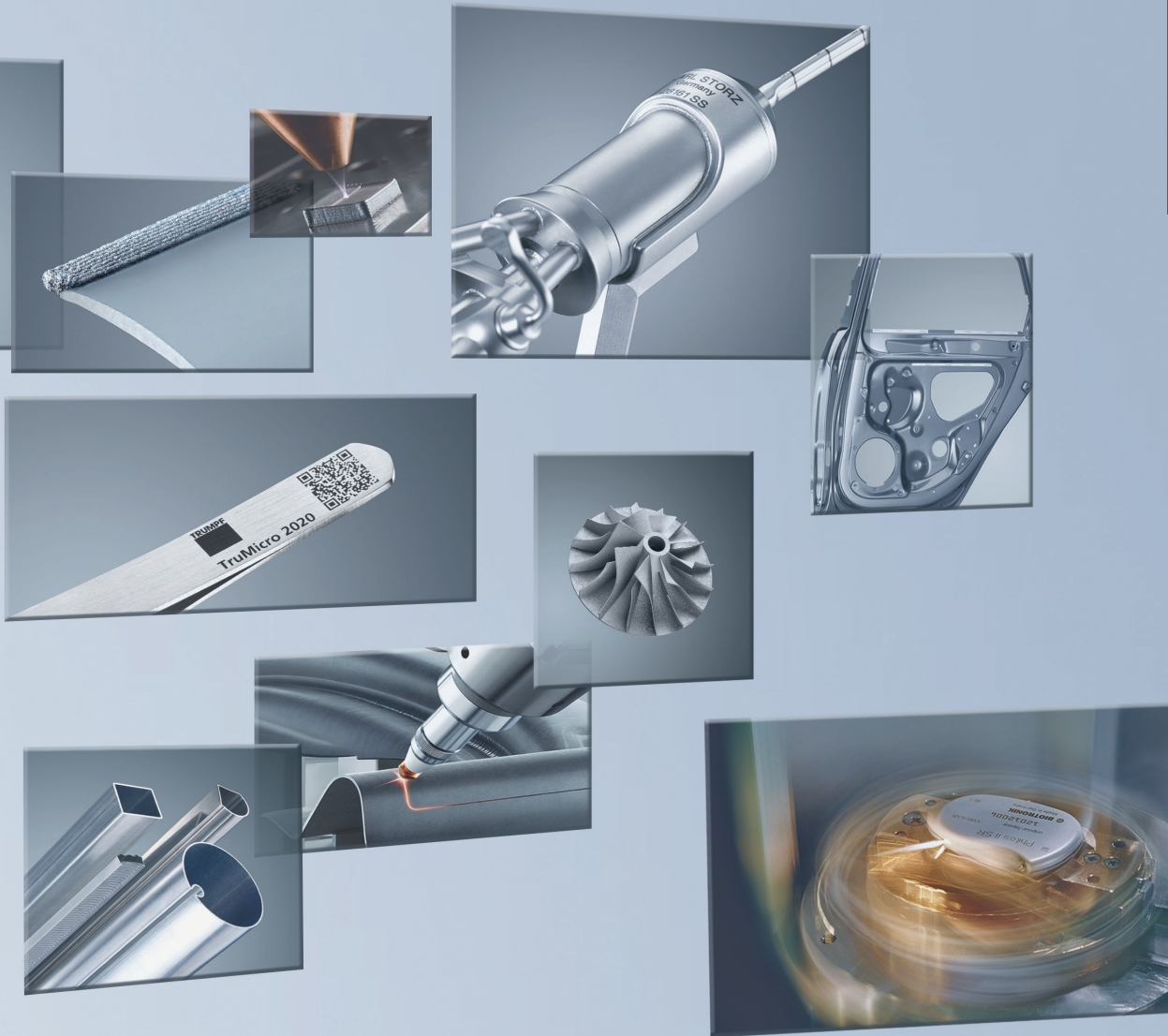
## The best solution for your manufacturing process

We place extremely precise and accurate demands on our products in terms of their technology, engineering, quality, and usability in practice.



# Your application, our technologies

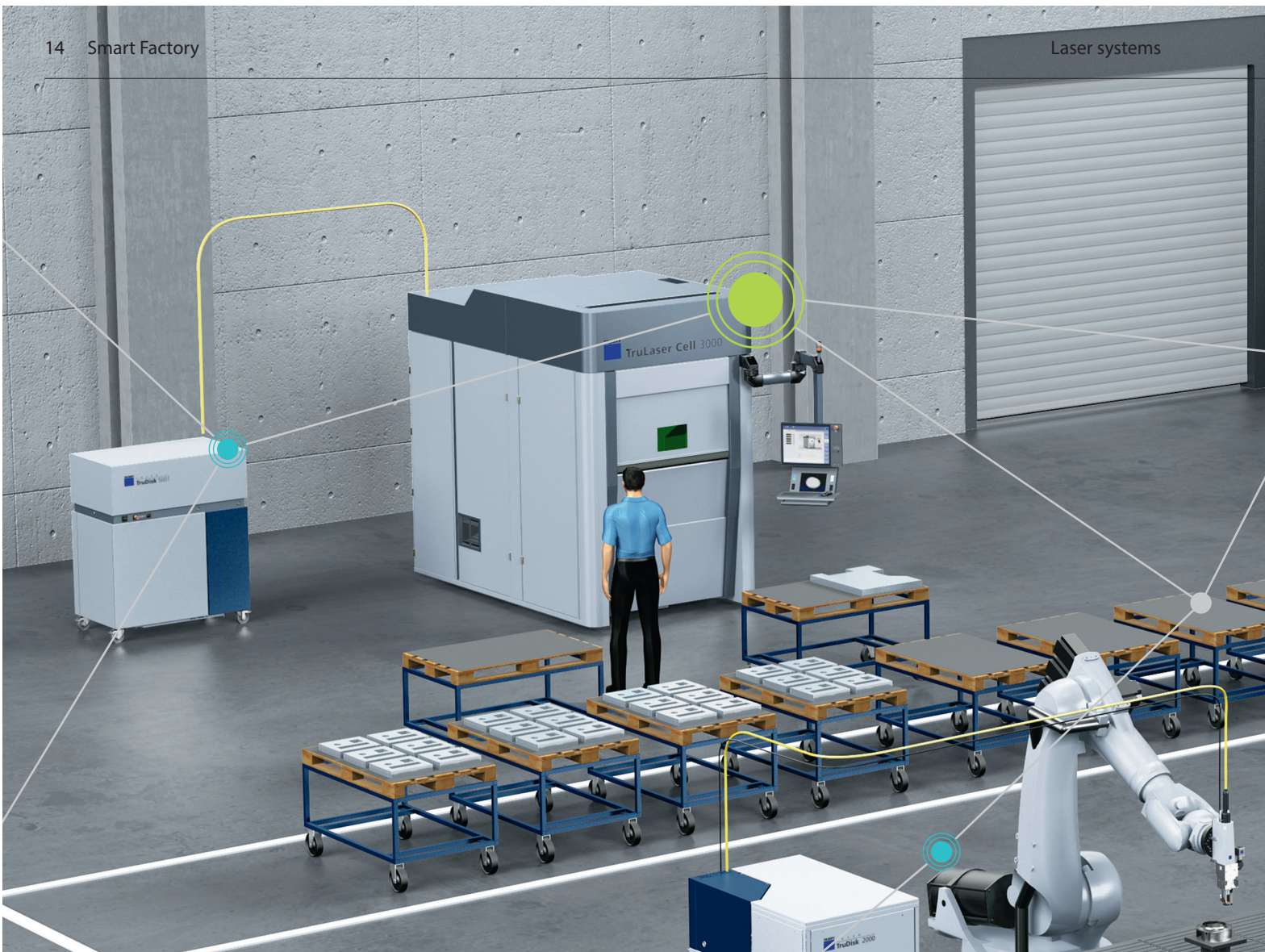
Our customers come from a wide variety of industries and they each have their own unique processing tasks. TRUMPF offers laser systems that cater to all industrial applications, whether you work with rapid mass manufacture or batch size 1, from robust joining to fine separating, you will find the right solution for your manufacturing needs in our product range. From beam sources, processing optics, and system solutions, to beam guiding components and intelligent sensor systems, you can obtain everything from a single source.



Find out more about what lasers can do and how you could use laser technology in your work here: [www.trumpf.com/s/k4ivz1](http://www.trumpf.com/s/k4ivz1)

	TruPrint	TruLaser Cell 1100	TruLaser Cell 3000	TruLaser Cell 5030	TruLaser Cell 7040	TruLaser Cell 8030	TruLaser Station 5005	TruMark Station 5000
Welding		■	■		■		■	
Deposition welding			■		■			
Plastic welding							■	
Cutting			■	■	■	■		
Drilling and removing material			■*				■*	■
Hardening			■*		■*			
Generating	■		■		■			
Marking								■

\* Upon request.



# Condition-based Services

Would you like to sharpen your competitive edge? Digital networking offers numerous advantages: you see more, know more, and get the best out of your laser systems and your overall production. Condition-based Services already provide you with a full overview concerning the conditions of the beam source in your laser system. Additionally, TRUMPF Technical Service experts and algorithms support you in the timely detection and prevention of unplanned idle states.



## Central Link

Central Link is an interface package for networking your machinery and preparing applications for Industry 4.0. With the OPC UA communication standard you can use machine data such as control variables, measured values, or parameters for individual applications.

### Advantages of networking:

- Increase in productivity
- Increased availability through reduction of idle states
- Transparent overview concerning the statuses of your production
- Traceable process data



Uncover your production's hidden potential:  
[www.trumpf.com/s/d0w8vz](http://www.trumpf.com/s/d0w8vz)

# TruPrint



01

**Large build volume**  
through the use of two supply  
cylinders for ample powder supply

02

**Work profitably**  
due to a powerful laser and industrial part and  
powder management



Benefit from unlimited design freedom and manufacture 3D components from the powder bed: the TruPrint 3000 is your flexible solution for industrial additive manufacturing.



04

## Manufacture consistently and reliably

thanks to industrial software and monitoring solutions

03

## Faster setup

with our integrated exchangeable cylinder concept



Curious? Find out more about the TruPrint 3000 here: [www.trumpf.com/s/xglo9e](http://www.trumpf.com/s/xglo9e)

01

## Large build volume

through the use of two supply cylinders  
for ample powder supply

You can use the TruPrint 3000 to create complex components for industrial production using laser metal fusion (LMF), which gives you unlimited design freedom. The TruPrint 3000 LMF medium-format machine gives you ultimate flexibility in terms of the size and number of components; the build envelope is 300 mm diameter by 400 mm height and includes a large internal powder reservoir. Good component quality and robust processes are achieved through preheating of up to 200°C.



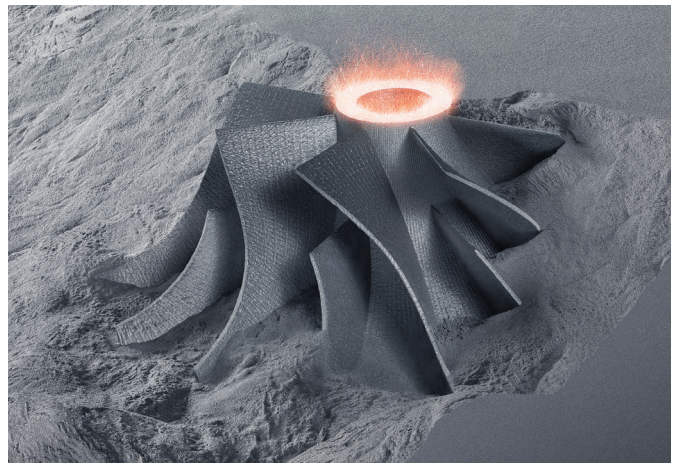
LMF can be used to generate complex internal structures, such as this burner head (by Siemens).

02

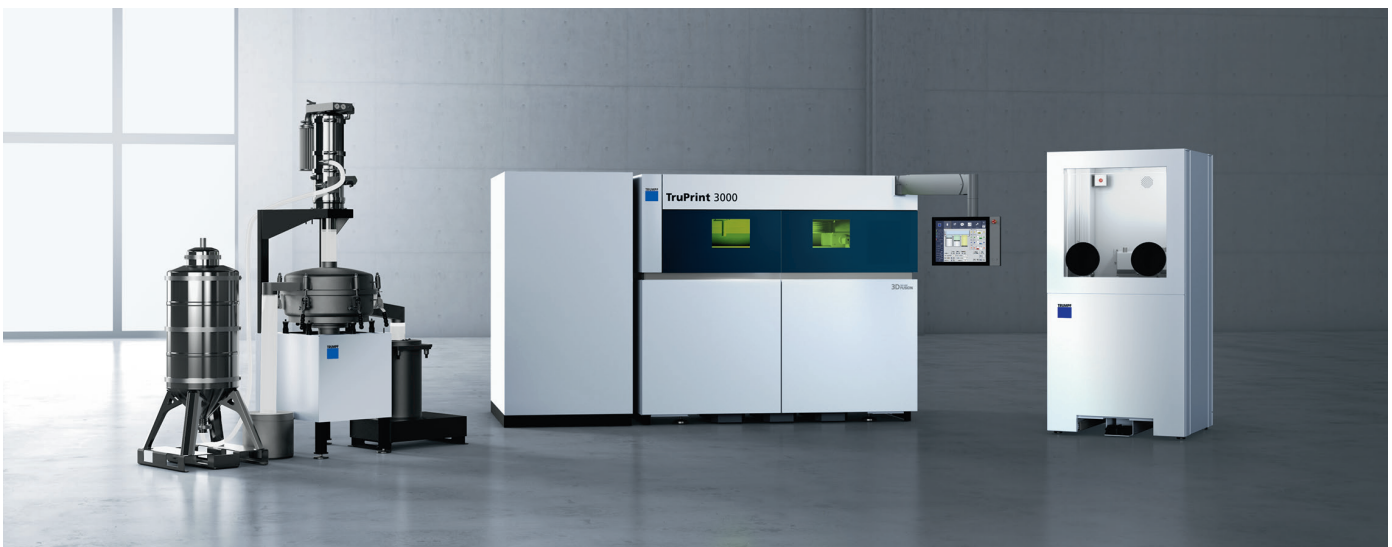
## Work profitably

due to a powerful laser and industrial  
part and powder management

The part and powder management system, which is comprised of a sieving station, unpacking station and powder silos, enables you to run production, unpack, and prepare for a new build job in parallel by moving all non-printing processes to the periphery. It also improves the safety of the process as contact with the powder is avoided. The productivity of your TruPrint is boosted by its powerful 500 W fiber laser, and also through maximum operational reliability. You can respond to different component requirements with flexibility due to the beam diameter, which can quickly be adjusted between 100 µm and 500 µm.



The laser not only melts the contours, but also fills in the dense parts of the component, which enables any geometry to be created.



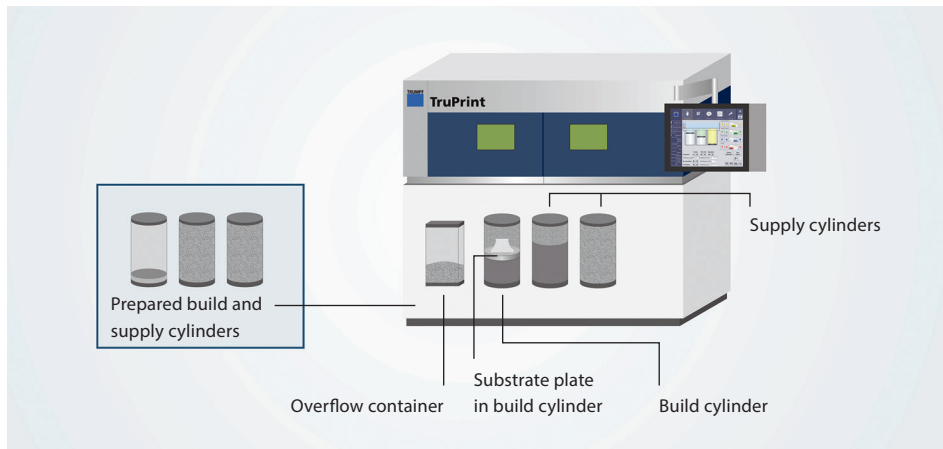
Part and powder management provides you with additive series production that is ready for industry. You can use it for one or more TruPrint machines.

03

## Faster setup

with our integrated exchangeable cylinder concept

The exchangeable cylinder concept ensures shorter set up times, which increases the productivity and machine utilization rate, as well as the capacity of your machine.



04

## Manufacture consistently and reliably

thanks to industrial software and monitoring solutions

The TruTops Print software package with Siemens NX makes sure there are no gaps in the data chain and that you have an overview and full control at all times. Intelligent monitoring solutions enable you to not only supervise and analyze the printing process, but also control it remotely.



➤ For 3D printing on an industrial scale, TRUMPF has two robust models to choose from, both of which are suitable for producing single parts or for mass manufacturing parts in a highly productive way:

■ TruPrint 1000

■ TruPrint 3000

# TruLaser Cell 1100

The flexible beam guidance system is your specialist machine for endlessly welding a variety of seam geometries on bands, pipes, profiles, and for welding rotationally symmetrical parts.

01

## Easy to integrate

thanks to a flexible, compact structure

02

## Extremely efficient

due to state-of-the-art beam sources and calibrated sensors

03

## Perfectly accessible

through variable adjustable axes

04

## Fully customized

Optional extras offer solutions for every application



01

## Easy to integrate

thanks to a flexible, compact structure

The compact and modular TruLaser Cell 1100 can be integrated into your production lines with ease. You can configure the beam guidance system to meet your specific needs in terms of the linear axes, the working height or process path. This makes it possible to weld in two different places at the same time.



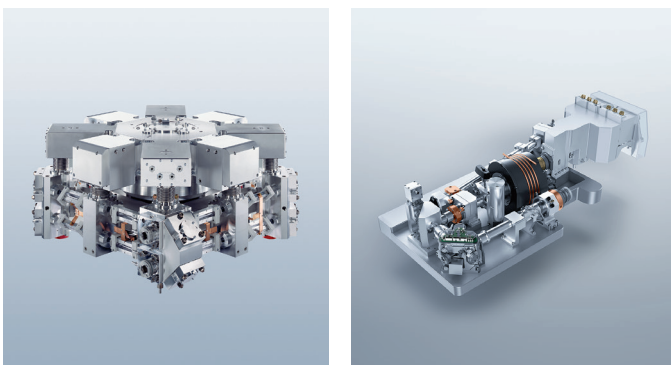
Non-stop manufacture – the system for endless welding professionals.

02

## Extremely efficient

due to state-of-the-art beam sources and calibrated sensors

With the TruLaser Cell 1100, you can take your production process to the next level. Simply choose the right beam source for your application – CO<sub>2</sub> laser or solid-state laser – and the highly flexible system will position the beam and optics. The perfectly calibrated sensors guarantee optimum welding results. All of these features work together to cut your operating costs and increase your production speed.



Use the beam source you need: The TruFlow CO<sub>2</sub> laser (left) or the TruDisk disk laser – the choice is yours.

03

## Perfectly accessible

through variable adjustable axes

The various axes offer ideal adjustment options, both for tubes as well as profiles. The variable beam guidance can be integrated into all common profile systems due to its compact design.



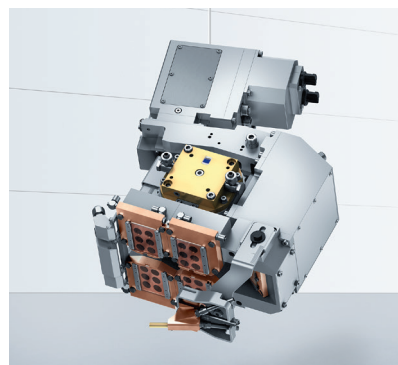
Optimally equipped even for rotationally symmetrical components.

04

## Fully customized

Optional extras offer solutions for every application

A wide range of welding optics with linear or swivel axes, ensure the utmost flexibility. Sensor systems for finding and tracking seams, along with functions such as SeamLine and SeamLine Pro, guarantee maximum quality, reliability and productivity.



You too can achieve the perfect seam with the right process monitoring system.



You can find still more information about the TruLaser Cell 1100 here: [www.trumpf.com/s/20q1n3](http://www.trumpf.com/s/20q1n3)

# TruLaser Cell 3000



01

## Unique process flexibility

Welding, cutting, and laser metal deposition

02

## Highly productive processing

due to customized automation solutions and a dynamic axis system

The compact TruLaser Cell 3000 is a true all-round machine, delivering premium-quality processing results with unrivaled flexibility. With capabilities such as laser welding, laser cutting, and laser deposition welding - the technology of the future - this machine is paving the way to new manufacturing techniques.



05

## Spacious and most flexible work area

with compact machine design

04

## Reliable processing

thanks to intelligent image processing and laser power sensor system

03

## Cost-efficient production

with top component quality



You can find anything else you would like to know about the TruLaser Cell 3000 here:  
[www.trumpf.com/s/woxpy9](http://www.trumpf.com/s/woxpy9)

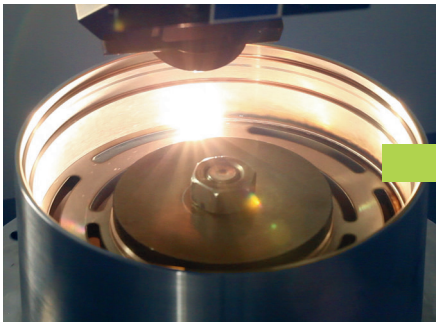
01

## Unique process flexibility

Welding, cutting, and laser metal deposition

With groundbreaking flexibility without compromise the universal TruLaser Cell 3000 prepares you for any challenge. A quick-change concept means you can switch from welding to cutting in under 5 minutes. As a result, you minimize down time while still benefitting from the advantages of laser welding. With laser metal deposition, you set the course for successful future production.

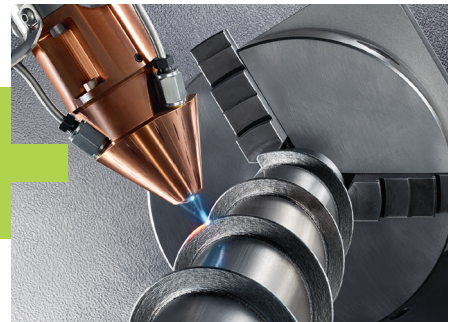
Welding



Cutting



Deposition welding



02

## Highly productive processing

due to customized automation solutions and a dynamic axis system

Do you need to handle large quantities? No problem. Loading and unloading using rotational changers parallel to production, as well as the highly dynamic axis system with linear drives, decrease your production times significantly. The automatic lifting doors on the sides make it possible to connect the machine to transfer systems and enable equipping with robots.



The TruLaser Cell 3000 can easily be loaded and unloaded using robots.

03

## Cost-efficient production

with top component quality

When it comes to laser welding, BrightLine Weld sets new standards with regard to the welding speed and quality. Depending on the material, it enables an increase in the feed rate of up to 300% or a reduction in energy consumption of up to 40% while ensuring the same welding depth. In combination with the highly precise axis system, this ensures the very best component quality at all times.



With BrightLine Weld, materials such as mild steel, stainless steel, or even copper and aluminum can be welded virtually spatter-free.

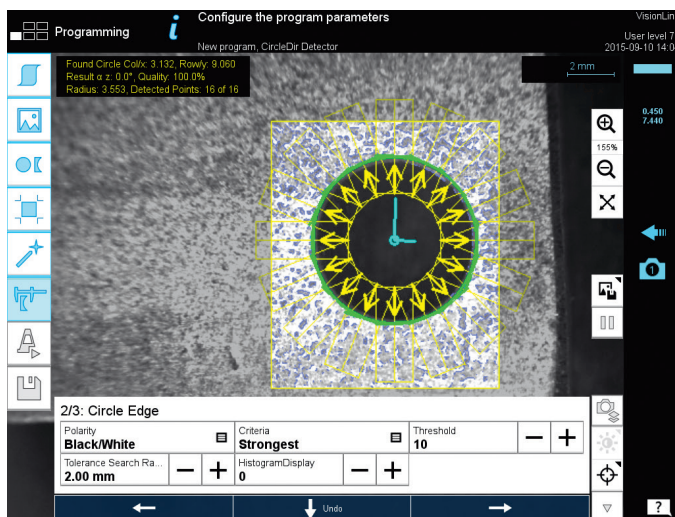


04

## Reliable processing

thanks to intelligent image processing and laser power sensor system

Powerful sensor systems ensure comprehensive process monitoring and fault-free machining processes. VisionLine image processing automatically detects the position of the component, forwards the information to the controls, and ensures that the weld seam is always positioned in the right place. CalibrationLine guarantees a constant laser power on the workpiece.



The image processing automatically measures the component, ensures safe and reliable processes during welding, and prevents the production of faulty parts.

05

## Spacious and most flexible work area

with compact machine design

Boasting the largest and most flexible work area in its class, the TruLaser Cell 3000 offers space for large installations, comprehensive fixtures and automation systems. With an additional motor-driven workpiece axis, you can also process 3D components which are up to 50% larger.



The large work area can also be accessed from the side and enables large components to be processed in a minimal installation area.

# TruLaser Cell 5030

With flying optics and a solid-state laser, the machine performs with excellent dynamics and optimal precision.

01

**Low-cost introduction**  
to 3D laser cutting

03

**Dynamic and precise**  
with flying optics



02

**Top operator convenience**  
due to intuitive software support

04

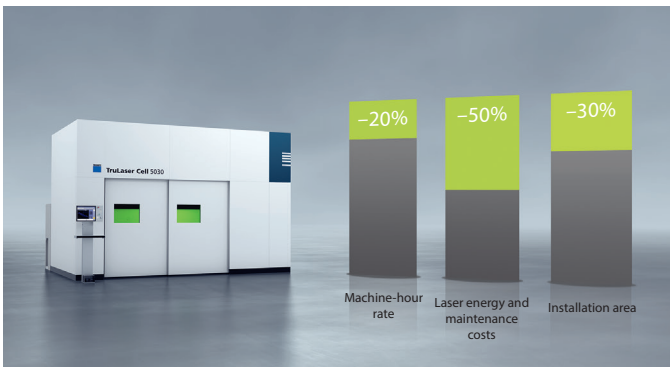
**Top quality**  
thanks to unique features

01

## Low-cost introduction

to 3D laser cutting

With TruLaser Cell 5030 you can reduce the machine-hour rate by up to 20% in comparison to hybrid and sheetmover machines. Benefit from low acquisition costs of the TruDisk disk laser, which is cost-efficient and robust in operation.



The system impresses with low maintenance costs.

02

## Top operator convenience

due to intuitive software support

With the TruTops Cell Basic software you can reliably carry out changes to the machine. All relevant technology parameters of the laser are stored for the typical materials. The automatic FocusLine focus position adjustment runs in new components at lightning speed. The slim Z-axis and the quick-open doors on the front make the system easily accessible.



The teachbox allows you to operate your machines easily and with flexibility.



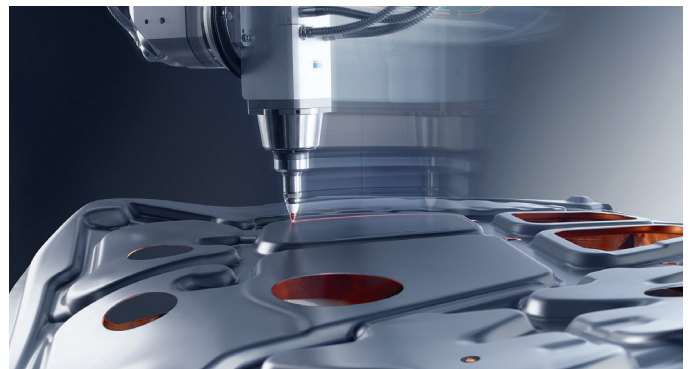
More information about the TruLaser Cell 5030 can be found here:  
<http://www.trumpf.com/s/j5ra70>

03

## Dynamic and precise

with flying optics

With X-Blast Technology you work at a greater distance to the sheet metal. This reduces nozzle collisions and increases the quality of the 3D cutting edges. Flying optics also contribute to precise results. Nevertheless, in the event of a collision, the magnetic coupling prevents damage to the machine.



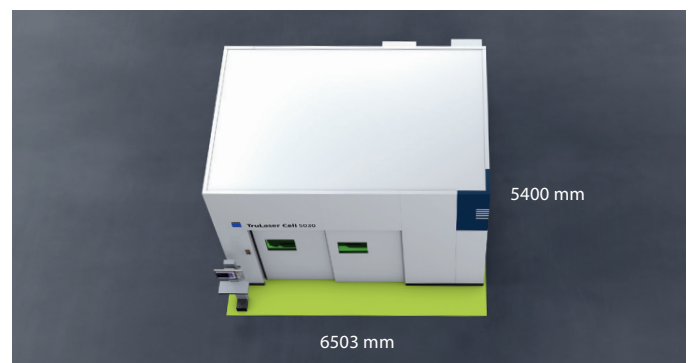
Extremely high processing speeds are enabled by the same optical setup and drive principle as in 3D high-end machines.

04

## Top quality

thanks to unique features

Optimal coordination between laser, machine, and software forms the foundation for excellent processing quality; with the TruLaser Cell 5030 you have all three building blocks from TRUMPF. Machine operators are supported by the latest functions such as Smart Optics Setup, for a quick and convenient setup. The precision of the machine can be automatically tested during the production process with ObserveLine Professional, which reduces the production of faulty parts to a minimum.



The installation area is reduced to a minimum.

# TruLaser Cell 7040



01

## Unique flexibility

in 3D processing with  
solid-state or CO<sub>2</sub> lasers

02

## Top productivity

with frequently changing series  
and lot sizes

Do you wish to process two- or three-dimensional components?  
With TruLaser Cell 7040, you will be perfectly equipped to do both.  
Switch between cutting and welding quickly and easily.

05

## Fast setup of components

due to the teach panel, MobileControl  
app, and TTC Basic

04

## Perfect ergonomics

with movable control panel and  
consistent work area illumination

03

## Top process reliability and quality

thanks to X-Blast Technology and  
low-spatter welding



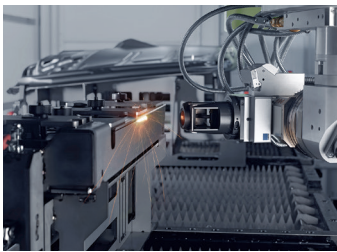
More information about the  
TruLaser Cell 7040 can be  
found here:  
[www.trumpf.com/s/weoethn](http://www.trumpf.com/s/weoethn)

01

## Unique flexibility

in 3D processing with solid-state or CO<sub>2</sub> lasers

The TruLaser Cell 7040 was specially developed for a flexible production environment. You can switch between 3D cutting and welding on the same machine. The 2 in 1 fiber also automatically adjusts the laser beam optimally to suit the respective processing task, meaning you are always perfectly equipped.



Retool quickly – with the 2 in 1 fiber you can cut and weld using the same optical laser cable, and always have the ideal beam quality for the respective machining process.

02

## Top productivity

with frequently changing series and lot sizes

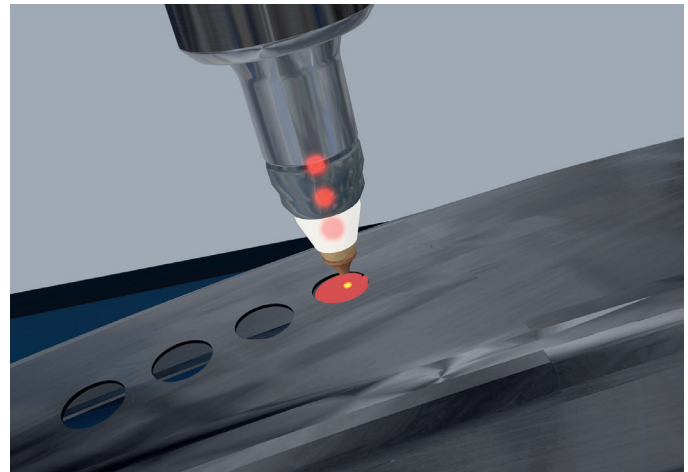
High positioning speeds and axis dynamics ensure short production times. Piercing on-the-fly with FastLine Cell reduces nonproductive times during cutting by up to 40%. The quick-open front doors made of lightweight glass-fiber-reinforced material cut opening and closing times by 35%. You can save even more time – by loading and unloading parallel to production in two-station operation or with the rotational changer. This results in more cost efficiency than ever before, without compromising on reliability.

03

## Top process reliability and quality

due to X-Blast Technology and low-spatter welding

The X-Blast nozzle technology ensures consistently exceptional 3D cutting quality due to the greater nozzle-sheet distance. The ObserveLine sensor system inspects the cut contour at lightning speed. Additionally, low-spatter welding with BrightLine Weld achieves outstanding weld seam quality, and also has feed rates which are up to three times higher. This noticeably increases the quality of your components, and saves time and money.



Patented ObserveLine testing system for automated inspection of cut contours.



In a divided work area, loading and unloading can be carried out parallel to production. The flexible operating panel and bright work area provide a high level of convenience for the operator.

04

## Perfect ergonomics

due to movable control panel and consistent work area illumination

The ergonomic control panel can be moved along the entire machine, ensuring a perfect view of the work area from every angle. The bright and optimally illuminated work area guarantees constant comfort while working. The Smart Optics Setup station also ensures that setting the optics is quick and reliable.



Smart Optics Setup ensures quick and reliable setting and adjustment work on the optics.

05

## Fast setup of components

due to the teach panel, MobileControl app, and TTC Basic

The compact teach panel with 6D mouse makes it easier to quickly run in, teach, and move the axes. The TruTops Cell Basic software enables you to adjust programs directly on the machine – without making changes in the offline programming system. Additionally, the controls can automatically detect which optics have been installed. Switching optics is therefore quick and error-free.



The MobileControl app and teach panel enable quick program creation at the workpiece.

# TruLaser Cell 8030



01

**Top productivity**  
in series production

02

**More efficient production**  
thanks to the economical TruDisk 2000



The second-generation TruLaser Cell 8030 sets new standards in the 3D cutting of hot-formed components. New options and optimized details ensure ultimate productivity and reliability.



03

## Clever functions

for high processing dynamics  
and safety

04

## Save space

due to the compact installation area



You can find out even more  
about the TruLaser Cell  
8030 here:  
[www.trumpf.com/s/uv1ld5](http://www.trumpf.com/s/uv1ld5)

01

## Top productivity

in series production

The TruLaser Cell 8030 makes your production process exceptionally fast. Options such as dynamics level 2 speed up the machine and reduce cycle times by as much as 11% when making complex components, while different functions ensure that processes are reliable and the results are optimal. Intelligent automation solutions also make sure that bottlenecks do not arise when loading and unloading manually. With a rotary indexing table or robots to semiautomate your process, you can minimize cycle times while making production more productive.



A rotary indexing table and robots keep cycle times to a minimum.



The remaining time display lets you know at a glance how the component, and indeed the entire order, is progressing.

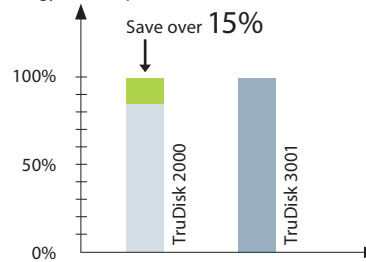
02

## More efficient production

thanks to the economical TruDisk 2000

No matter what your application, you have a wide range of lasers at your disposal. Using the TruLaser Cell 8030 with a compact fiber-guided TruDisk 2000 laser, for example, would make your production process especially efficient. This system boasts unsurpassed beam quality and exceptional focusability, which saves electricity and thereby reduces the cost per part and also has a positive effect on the size of your investment.

Energy consumption



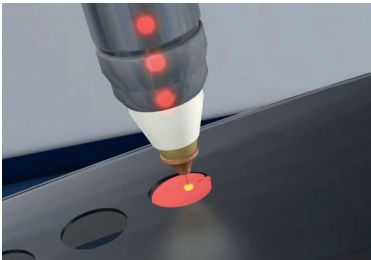
Benefit from the outstanding beam quality of our solid-state lasers and save real money.

03

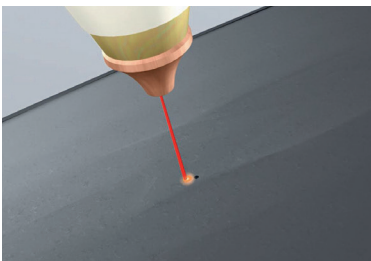
## Clever functions

for high processing dynamics and safety

Two optical measuring processes ensure greater safety on the TruLaser Cell 8030. ObserveLine Comfort checks whether a contour has been cut out in full, thereby preventing cutting slugs getting caught in the finished part. ObserveLine Professional monitors the positioning accuracy of the machine and can detect even the tiniest of positioning errors in the cutting nozzle. The precise and secure magnetic coupling enables you to carry on working, even in the event of a collision. These two functions will save you money by making your production line faster and creating less reject parts.



With the ObserveLine Comfort measuring system, you can be sure that each cut is made in full – every single time.



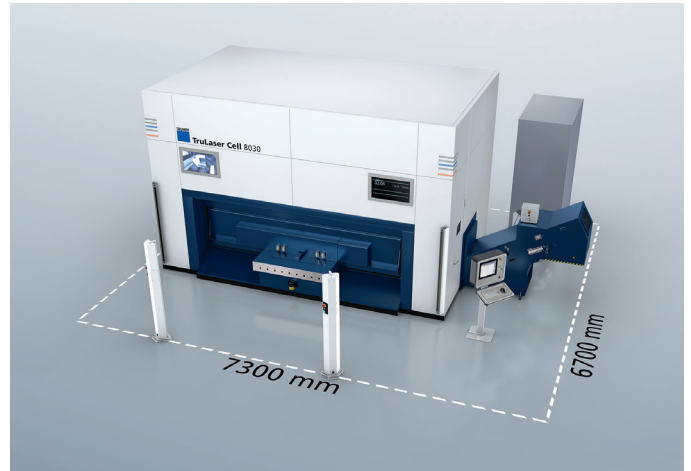
Perfect parts: The ObserveLine Professional measuring system checks that the optics are in the correct position at all times.

04

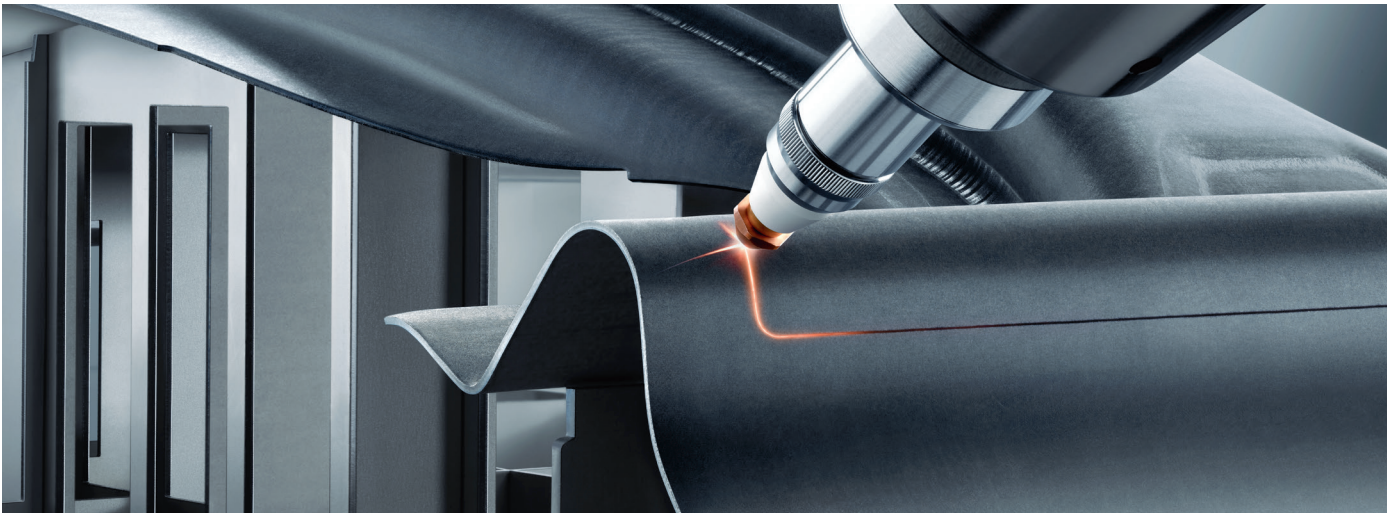
## Save space

due to the compact installation area

Lacking space in your production facility? No problem! The compact TruLaser Cell 8030 has a very small footprint, meaning you have the flexibility to plan multiple machines into your workspace according to your specific needs. A further advantage of the system is that it is ergonomic and extremely easy to use. The rotating changer can be loaded and unloaded from the front as well as the sides.



The compact, easy-to-use laser cell fits into any production line.



The highly dynamic drive configuration in combination with maximum machine rigidity will speed up your manufacturing process.

# TruLaser Station 5005

Laser welding at just 1 ft<sup>2</sup>? With the TruLaser Station 5005, you can start small but think big. This compact laser machine with up to five axes enables you to process small and medium-sized parts easily and cost-effectively.

01

## Small initial outlay

due to low  
investment costs

02

## Easy to program

with the intuitive operating  
concept

03

## Reliable processing

enabled by fully integrated image  
processing

04

## Flexible processing

thanks to different optics

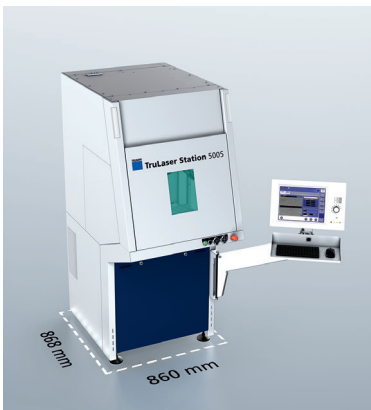


01

## Small initial outlay

due to low investment costs

Are you looking for the right machine to enter the world of laser welding with? Look no further than the TruLaser Station 5005. This compact machine (including exhaust system) requires just 1 ft<sup>2</sup> of space and, thanks to lower production costs, your investment pays off even if you are only producing a small volume of parts.



Start small, think big:  
The TruLaser Station 5005 requires only 1 ft<sup>2</sup> of space.

02

## Easy to program

with the intuitive operating concept

The panel PC on the TruLaser Station 5005 can help you easily operate the laser system quickly and comfortably – and teach in parameters via the touchscreen directly on the component. Remote working is possible too, thanks to the Smart Teach app for the programmable focusing optics (PFO). The digital camera transmits the live image to the app, so you can conveniently control everything from your tablet.



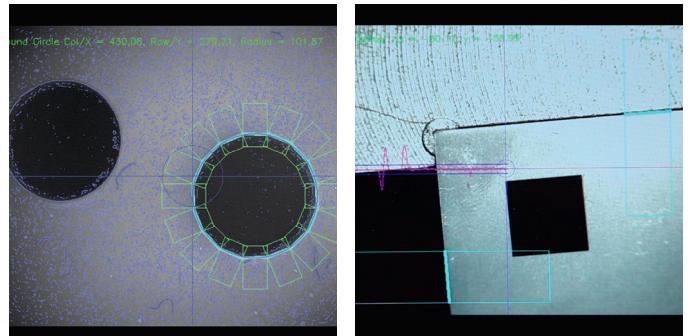
Quick and comfortable to operate:  
Using the panel PC, you can teach in parameters via the touchscreen directly on the component.

03

## Reliable processing

enabled by fully integrated image processing

The VisionLine image processing system considerably increases the stability of your process while improving the quality of your components. This option automatically detects the features of the component's geometry and can correct the NC machining program if necessary. The result? Premium-quality parts and minimal costs.



VisionLine detects the position of the part using its unique features. In the next step, VisionLine corrects the position of the part if it has moved out of place.

04

## Flexible processing

thanks to different optics

The TruLaser Station 5005 is extremely versatile with its flexible processing. The system gives you the option to use a BEO optic or a PFO scanner optic, and works with up to five axes. Plastics as well as metals can be processed due to different laser sources and parameters.



TruLaser Station 5005 with motorized swiveling BEO D70 focusing optics and rotational axis.



Getting started couldn't be easier. You can find out more about the TruLaser Station 5005 here:  
[www.trumpf.com/s/w3v5fu](http://www.trumpf.com/s/w3v5fu)

# TruMark Station

Designed with adaptability, cost-efficiency and flexibility in mind, the highly compact TruMark Station 5000 is the consistent, reliable and complete solution for laser engraving and laser beam machining work.

01

## Maximum compatibility

Perfect for all TRUMPF marking lasers

02

## Work safely

thanks to laser protection and emissions extraction

03

## Can be used anywhere

in the production line or as a single workstation

04

## Create large parts

thanks to lengthways transfer, even for large workpieces



01

## Maximum compatibility

Perfect for all TRUMPF marking lasers

There is a multitude of different TRUMPF lasers and optics available for the TruMark Station 5000. They have all been configured to work perfectly with the marking station, so you can choose the optimum combination for your particular marking or material removal job – while staying flexible at all times.



TRUMPF has the right marking laser for any task. Choose from among the best!

02

## Work safely

thanks to laser protection and emissions extraction

This machine ensures maximum safety for your staff in minimal space, the smoke and particle emissions exhaust system comes built into the machine frame of the TruMark Station 5000 to save space. The combination filter with activated carbon is monitored using a differential pressure controller and the volume flow can be varied using a potentiometer.



Looking for a compact marking station?  
You can find everything you need to know about the TruMark Station here:  
[www.trumpf.com/s/24cbg6](http://www.trumpf.com/s/24cbg6)

03

## Can be used anywhere

in the production line or as a single workstation

Benefit from the unbeatable combination of a larger work area and a compact design. The TruMark Station 5000 makes the perfect addition to your production line – or it can simply be set up as a single workstation. Do you prefer to sit or stand when working? You can do either thanks to the machine's intelligent, ergonomic design.



Easy to integrate into your production line – with the relevant laser safety class or even without an enclosure.

04

## Create large parts

thanks to lengthways transfer, even for large workpieces

The TruMark Station 5000 is easy to insert into your workflow and integrate into your production line, as the openings on the sides of the housing make it possible to transfer workpieces lengthways. Processing large and heavy components is no problem for the marking system.



You will always find the right TruMark Station for your size. Choose the right machine for you depending on your workpieces and batch sizes.

TruMark Station 1000 and 3000 –  
small to medium components and lot sizes

TruMark Station 5000 and 7000 –  
large components and lot sizes

# TruServices. Your Partner in Performance

For a successful future, rely on services which will carry you forward in the long term, and use them to create the best conditions for successful production. We create opportunities together so that you can use your TRUMPF laser systems optimally at all times, and adjust to changes with flexibility. You can count on us to be a reliable partner who supports you with tailor-made solutions and service packages that enable you to produce economically and at a consistently high level, thus optimizing your value creation sustainably.



## EMPOWER

We will support and assist you in creating the best conditions for successful manufacturing.

## SUPPORT

We're there to ensure the essential flexibility and availability of equipment in your day-to-day operations.

## IMPROVE

If you want to gradually focus your manufacturing on maximum value creation, we will work together to reach your goal.



Service Agreements



Select the right scope of services with predictable costs, technical hotline, remote support, on-schedule maintenance, and repairs including spare parts. You benefit from inexpensive package prices and lower processing outlay.

Technical Service



Our global service network helps you with quick, technical support, and preventively ensures the availability of your TRUMPF system. We support you from installation to maintenance all the way to system repairs. Customer service specialists advise you on whether the most efficient solution is either in person and on-site support, or problem solving via remote support..

Process Optimization



With our support, you can uncover the hidden potential of your production process by using our expertise to secure your competitive edge. TRUMPF specialists can offer you individual advice on your particular applications and can optimize your processes.

Genuine Parts



Produce with as much reliability and precision as possible – genuine TRUMPF spare parts and consumables are ideally suited for your system, and meet top quality requirements. Our global logistics network ensures that you receive the required parts as quickly as possible.



Find out about our comprehensive complete package of helpful services here:  
[www.trumpf.com/s/services](http://www.trumpf.com/s/services)

# Technical data

## TruLaser Station 5005 TruLaser Cell 3000, 5030, 7040, 8030

Technical data						
		TruLaser Station 5005	TruLaser Cell 3000	TruLaser Cell 5030	TruLaser Cell 7040	TruLaser Cell 8030
<b>Axis positioning range</b>						
X	in	11.8	31.5	118.1	157.5	118.1
Y	in	11.8	23.6	59.1	59.1/78.7	59.1
Z	in	19.7	15.7 (+11.8) <sup>1)</sup>	27.6	29.5	23.6
B/C <sup>2)</sup>	°	± 120/n x 360	± 135/n x 360	± 135/n x 360	± 135/n x 360	± 135/n x 360
Max. payload	lbs	66.1	881.8	551.2 (3D work table), 1763.7 (2D/3D work table)	3527.4	661.4
<b>Speed</b>						
X/Y/Z	ft/min	19.7	164.0	196.9	328.1	328.1
Simultaneous	ft/min	32.8	278.9	341.2	567.6	567.6
B/C <sup>3)</sup>	1/min	15/200	120/400	60	90/90	90/90
<b>Acceleration</b>						
X/Y/Z	ft/s <sup>2</sup>	1.6	32.8	16.4	29.5/32.8/32.8	32.8
B/C <sup>3)</sup>	rad/s <sup>2</sup>	65/160	125/500	200/100	200/100	200/100
<b>Positioning deviation Pa</b>						
Linear axes X/Y/Z	in	0.004	0.0006 (0.0002) <sup>2)</sup>			
Rotational axes B/C <sup>3)</sup>	°	0.1/0.2	0.02/0.02			
<b>Maximum positioning variation</b>						
Linear axes X/Y/Z	in			0.001	0.001	0.001
Rotational axes B/C <sup>3)</sup>	°			0.005	0.005	0.005
<b>Maximum positioning deviation</b>						
Linear axes X/Y/Z	in			0.003	0.003	0.003
Rotational axes B/C <sup>3)</sup>	°			0.015	0.015	0.015

Subject to alteration. Only specifications in our offer and order confirmation are binding.

## TruLaser Station 5005

### TruLaser Cell 3000, 5030, 7040, 8030

Technical data						
		TruLaser Station 5005	TruLaser Cell 3000	TruLaser Cell 5030	TruLaser Cell 7040	TruLaser Cell 8030
Laser						
Max. laser power	W	1000	8000 <sup>4)</sup>	2000–3000	6000 <sup>4)</sup>	4000
Available lasers		TruDisk, TruPulse, TruDiode, TruFiber, TruMicro	TruDisk, TruPulse, TruDiode, TruFiber, TruMicro	TruDisk	TruFlow, TruDisk	TruDisk
Available technologies		Laser welding	Laser welding, laser cutting, laser deposition welding	Laser cutting	Laser welding, Laser cutting	Laser cutting
Rotating changer						
Diameter	in		34.3		181.1	157.5/189.0
Max. payload per side	lbs		209.4		1653.5/2204.6	661.4
Stations	Number		2		2	2/3
Rotation time	s		3		3	2.3
Total typical nonproductive time	s		5.2		7	5
Dimensions						
Width/depth/height	in	33.9/51.8/79.5	63.0/111.8/104.3	<sup>5)</sup>	<sup>5)</sup>	<sup>5)</sup>

<sup>1)</sup> With additional W1 axis. <sup>2)</sup> High-accuracy axis system. <sup>3)</sup> C180 rotational axis. <sup>4)</sup> Higher laser power upon request.

<sup>5)</sup> Dimensions are listed in the standard layout of the custom machine

Subject to alteration. Only specifications in our offer and order confirmation are binding.

## TruLaser Cell 1100

Technical data		
TruLaser Cell 1100		
Axis positioning range		
X	in	11.8 x 19.7
Z	in	11.8 x 19.7
Q	in	± 1.0
Positioning accuracy X/Z	in	± 0.004
Positioning accuracy Q	in	± 0.002
Max. laser power	W	15,000
Available lasers		TruFlow, TruDisk, TruDiode

Subject to alteration. Only specifications in our offer and order confirmation are binding.

# Technical data

## TruMark Station 1000, 3000, 5000, 7000

Technical data					
		TruMark Station 1000	TruMark Station 3000	TruMark Station 5000	TruMark Station 7000
Available marking lasers		TruMark Series 1000, 3000, TruMark 5010	TruMark Series 1000, 3000, 5000	TruMark Series 1000, 3000, 5000, 6000, TruMicro Mark Series 2000	TruMark Series 3000, 5000, 6000
Dimensions	in	16.1 x 20.5 x 32.7	24.8 x 32.3 (desktop)/68.9 (standalone) x 26.4	33.9 x 78.7 x 51.6	47.2 x 78.7 x 47.2
Weight (without laser)	lbs	77.2	198.4 (desktop)/352.7 (standalone)	903.9	1349.2
Electrical connection (voltage)	V	100/240	100/230	115/230	200/400
Electrical connection (frequency)	Hz	50/60	50/60	50/60	50/60
Electrical connection (amperage)	A	2.6 at 230 V	3/4/6/9/13	10/13/15/16/20	12.5/25
Max. power consumption	W	600	600	2550	5000
Max. workpiece dimensions	in	9.8 x 5.9 x 11.8	17.3 x 7.9 x 13.8	26.8 x 19.7 x 27.6	39.4 x 15.7 x 19.7
Max. workpiece weight	lbs	11.0	26.5	110.2/55.1 (with X/Y axis)	220.5/55.1 (with Y axis)
Available axes		Z (manual)	Z	X   Y   Z	X   Y   Z
Max. travel	in	5.9	7.9	11.8   11.8   19.7/17.4 (TruMicro Mark)	25.6   14.8   15.7
Traveling speed	ft/min		9.8	19.7   19.7   4.9	49.2   49.2   2.3
Rotational axis	in	2.6	2.6	2.6, 5.9	2.6, 5.9
Door		Manual	Motorized	Motorized, available with rotary indexing table	Motorized
Exhaust system		External	Integrated, external possible	Integrated, external possible	Integrated, external possible
Laser safety class		1	1	1, 4 possible	1

Subject to alteration. Only specifications in our offer and order confirmation are binding.

## TruPrint 1000, 3000, 5000

Technical data				
		TruPrint 1000	TruPrint 3000	TruPrint 5000
Build volume (cylinder)	mm x mm	Ø 100 x H 100 Optional: Smaller installation space	Ø 300 x H 400	Ø 300 x H 400   Ø 290 x H 400 (reduction, if preheating > 200°C)
Building materials <sup>1)</sup>		Weldable metals in powder form such as: stainless steels, tool steels, aluminum <sup>2)</sup> , nickel-based, cobalt-chrome, copper, titanium <sup>2)</sup> , precious metal alloys <sup>2)</sup>	Weldable metals in powder form such as: stainless steels, tool steels, aluminum, nickel-based, cobalt-chrome, titanium alloys	
Build rate <sup>3)</sup>	cm <sup>3</sup> /h	2–18	5–60	5–180
Layer thickness <sup>4)</sup>	µm	10–50	20–150	
Laser source	W	200 fiber laser Option: Multi-laser 2 x 200 fiber laser	500 fiber laser	3 x 500 fiber laser
Beam diameter	µm	50, optional 30	100–500 <sup>4)</sup>	100–500
Preheater	°C	–	> 200	> 500
O <sub>2</sub> concentration	ppm	> 3000 (0.3%), optional > 100 (0.01%)	> 100 (0.01%)	
Exposure speed (powder bed)	m/s	Max. 3		
Protective gas		Nitrogen, argon		
Power supply	V   A   Hz	230   7   50/60	400/460   32   50/60	400   63   50/60
Dimensions (incl. filter)	mm	1445 x 730 x 1680	3385 x 1750 x 2070	4560 x 1628 x 2021
Weight (incl. filter, powder)	lbs	1433	9479.9	15619.8
Automation		–	–	Process starts automatically

<sup>1)</sup> Current raw material and parameter availability on request. <sup>2)</sup> Available with optional packages. <sup>3)</sup> Actual build rate consists of exposure and coating. Dependent on system configuration, process parameters, raw material, and fill level. <sup>4)</sup> Individually adjustable. Subject to alteration. Only specifications in our offer and order confirmation are binding.

## You can find more information at [www.trumpf.com](http://www.trumpf.com)

Technical datasheets available to download  
Ability to clearly compare up to three products  
Displays perfectly on any end device

# The passion that drives us

From production and manufacturing technology to laser systems and material processing, we develop highly innovative products and services to meet your needs. Our solutions are superbly reliable and ready for industrial use. We do everything we can to give you a powerful competitive edge, drawing on our expertise, experience, and a genuine passion for what we do.

## Industry 4.0 – solutions for your future

The fourth industrial revolution is changing the world of manufacturing. Is it possible to stay competitive internationally with all this change? Yes – with the opportunities offered by digital networking. With our pragmatic solutions, we will support you every step of the way on your networked manufacturing journey, helping you make your processes more transparent, more flexible and, first and foremost, more cost-effective. This will enable you to make the most of your resources and ensure your production process is fit for the future. TruConnect is synonymous with Industry 4.0 at TRUMPF. The range of solutions connects man and machine through information while covering all steps of the production process – from quotation through to shipping your parts.



**TruConnect**  
Your Smart Factory

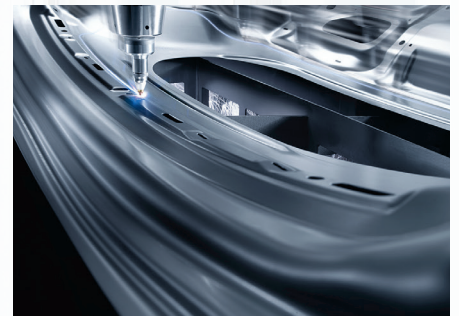


Check out our  
YouTube page:  
[www.youtube.com/  
TRUMPFtube](http://www.youtube.com/TRUMPFtube)



## Lasers for manufacturing technology

Whether on a macro, micro, or nano scale, we can offer you the right laser and the right technology to create an innovative and cost-efficient production environment for any industrial application. We can also provide you with appropriate system solutions, application know-how, and consulting services.



## Power-supply systems for high-tech processes

From semiconductor manufacturing to solar cell production, our MF and RF generators supply electrical power for induction heating-, as well as plasma and laser excitation at a clearly defined frequency and output, with high levels of reliability and repeatability.

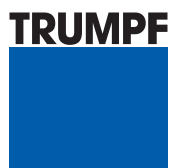


## Machine tools for flexible sheet metal and pipe work

From laser cutting and punching to bending and laser welding, we provide our customers with tailor-made machines and automation solutions for a versatile array of sheet machining processes. That includes advice, software, and services – in short, everything you need to achieve reliable production of high-quality products.



TRUMPF is certified to ISO 9001  
(Find out more: [www.trumpf.com/s/quality](http://www.trumpf.com/s/quality))



TRUMPF Inc.  
[www.trumpf.com](http://www.trumpf.com)