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 – and we even offer comprehensive after-sales services. Together we can boost your productivity!

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 work together with you to develop your process right from the very beginning.

We can help you rise to the challenge 8–9

TRUMPF delivers sophisticated complete solutions that have proven their mettle.

Everything from a single source 10–11
Your application, our technologies 12 – 13

Diverse solutions for varied tasks: Together will we find the right one for your production line.

Condition-based Services 14 – 15

Best conditions for a successful production.

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Find out more about our product range here.

TruServices. Your Partner in Performance 40 – 41

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

Technical data 42 – 45

All the technical information you need at a glance.
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 aim to pass on to you: You can expect technology that is both state of the art and tailored to the specific needs and concerns 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 too.

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 through to custom decorations – has had a laser involved in its manufacture.
Automotive industry

Laser technology has been a part of contemporary car manufacture for many years now. The automotive industry is a global one – 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 without processing problems. Or 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 even make it possible to use entirely new types of lightweight construction, such as intelligent structures or 3D-printed components, which will result in marked improvements to your product.

Powertrain
Working with drives often involves joining parts together. To machine your drive components you need quiet, splatter-free processes and deep, flawless seams that are long-lasting and can withstand harsh conditions. You are always in good hands with state-of-the-art laser technology from TRUMPF.
Medical engineering

Nowhere is having reliable processes more important than in medical engineering: With TRUMPF you can count on ultraprecise, reproducible results without the need for reworking, plus highly flexible production from batch size 1. The laser light works contactlessly, meaning that sterility is assured at all times. Being marked with a laser ensures that parts are traceable 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.
Utility vehicles and transportation

Modern laser machines are consistent, reliable and bring down the cost per part, for example when carrying out welding work 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.

Aviation and aerospace industries

From expensive certification processes and premium part quality to reliable reproducibility, the demands made in the aviation and aerospace industries are enormous. But with engineering from TRUMPF, you don’t have to worry about meeting them: 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 a global service team.

Science

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? Then you need state-of-the-art laser systems that are reliable and offer flexible parameterization. TRUMPF is helping numerous universities and institutes to acquire new knowledge.
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 want you to find 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

“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

“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
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 numerous 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
TruServices. Your partner in performance

- Worldwide technical service
- Functional enhancements
- Monitoring and analysis
- Training
- Application advice

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

The best complete solution for your manufacturing process

We place extremely exacting demands on our products in terms of their technology, engineering, quality, and usability in practice. We guarantee you won’t fail to notice this.
Your application, our technologies

Our customers come from a wide variety of industries and they each have their own unique processing tasks, since every application places very specific demands on technology. 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. You can obtain everything from a single source, from beam sources and system solutions through to beam guiding components, processing optics and intelligent sensor systems.
## Applications

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

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* 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
TruPrint

01
Achieve great things
thanks to a powder reservoir that’s up to the task of printing big products

02
Work profitably
thanks 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 additive industrial manufacturing.

Faster setup thanks to our integrated interchangeable cylinder concept

Manufacture consistently and reliably thanks to industrial software and monitoring solutions

Curious? Find out more about the TruPrint 3000 here: www.trumpf.com/xglo9e
Achieve great things thanks to a powder reservoir that’s up to the task of printing big products

Laser metal fusion (LMF) gives you unlimited design freedom. You can use the TruPrint 3000 to create complex components for industrial mass manufacture. The universal TruPrint 3000 LMF medium-format machine gives you ultimate flexibility in terms of the size and number of your components too — thanks to an average product size of 300 x 400 mm and a large internal powder reservoir. Good component quality and robust processes are achieved through preheating of up to 200°C as standard.

Work profitably thanks to a powerful laser and industrial part and powder management

The part and powder management system, comprising sieving station, depowdering station and powder silos, enables you to work while LMF is in progress and set up your machinery faster. It also improves the safety of the process as contact with the powder is avoided. The productivity of your TruPrint is boosted not only by its powerful 500 W fiber laser, but also through optimal usage of material and machine plus maximum operational reliability. You can respond to different component requirements with flexibility due to the beam diameter of between 100 and 500 µm, which can be adjusted individually.
Faster setup
thanks to our integrated interchangeable cylinder concept

Use your time efficiently: The build and supply cylinders can be changed quickly and while printing is in progress. This minimizes set-up times, which in turn improves your productivity and the capacity utilization of your machinery.

Manufacture consistently and reliably
thanks to industrial software and monitoring solutions

You have an overview and full control at all times. The TruTops Print software package with Siemens NX makes sure there are no gaps in the data chain. 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 three sturdy models to choose from, which are suitable for producing single parts or for mass manufacturing parts in a highly productive way:

- TruPrint 1000
- TruPrint 3000
- TruPrint 5000
TruLaser Cell 1100

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

01 Easy to integrate
thanks to a flexible, compact structure

02 Extremely efficient
thanks 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
Easy to integrate
thanks to a flexible, compact structure

Make life easy for yourself: The compact and modular TruLaser Cell 1100 can be integrated into your production lines with the utmost 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.

Perfectly accessible
through variable adjustable axes

The variable adjustable 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.

Extremely efficient
thanks to state-of-the-art beam sources and calibrated sensors

With the TruLaser Cell 1100, you can step your production process up a gear. Simply choose the right beam source for your application – CO₂ laser or solid-state laser – and the system is highly flexible when it comes to positioning the beam and optics. The perfectly calibrated sensors guarantee optimum welding results. All of these factors together cut your operating costs and increase your production speed.

Fully customized
Optional extras offer solutions for every application

Be more flexible thanks to a wide range of welding optics with linear or swivel axes. Sensor systems for finding and tracking seams together 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.
TruLaser Cell 3000

01
Unique process flexibility
Welding, cutting, laser metal deposition

02
Highly productive processing
due to customized automation solutions and a dynamic axis system
Laser welding, laser cutting and – the technology of the future – laser deposition welding: The compact TruLaser Cell 3000 is a true all-rounder, delivering premium-quality processing results with unrivaled flexibility and paving the way to new manufacturing techniques.

Spacious and most flexible work area with compact machine design

Reliable processing due to intelligent image processing and laser power sensor system

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/w0xpy9
Unique process flexibility
Welding, cutting, laser metal deposition

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 do not lose any 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

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.

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 concerned, it enables an increase in the feed rate of up to 300% or a reduction in energy consumption of up to 40% whilst ensuring the same welding depth. In combination with the highly precise axis system, this ensures the very best component quality at all times.

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

With BrightLine Weld, materials such as mild steel, stainless steel, or even copper and aluminum can be welded virtually spatter-free.
04

**Reliable processing**
due 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.

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05

**Spacious and most flexible work area**
with compact machine design

More for your money: Boasting the largest and most flexible work area in its class, the TruLaser Cell 3000 not only offers space for large installations and comprehensive fixtures and automation systems. With an additional motor-driven workpiece axis, you can also process 3D components which are up to 50% larger.

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

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

Having flying optics and a solid-state laser, the machine performs with good machine 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 due 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 and 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**

due 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. This reduces the production of faulty parts to a minimum.

The installation area is reduced to a minimum.
TruLaser Cell 7040

Unique flexibility
in 3D processing with solid-state or CO$_2$ lasers

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 so. Switch between cutting and welding quickly and easily.

**Top process reliability and quality**
due to X-Blast Technology and low-spatter welding

**Perfect ergonomics**
due to movable control panel and consistent work area illumination

**Fast setup of components**
due to the teach panel, MobileControl app, and TTC Basic
**01**

**Unique flexibility**
in 3D processing with solid-state or CO₂ 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 2in1 fiber also automatically adjusts the laser beam optimally to suit the respective processing task. This means you are always perfectly equipped.

**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. You produce with more cost-efficiency than ever before – and all this with absolute reliability.

**03**

**Top process reliability and quality**
due to X-Blast Technology and low-spatter welding

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

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### 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.
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.

Clever functions
for high processing dynamics and safety

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
More efficient production thanks to the economical TruDisk 2000

The choice is yours: 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 even has a positive effect on the size of your investment.
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 in no time at all, even in the event of a collision. These two handy functions will save you money by making your production line quicker and less prone to creating rejects.

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.

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.

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 m²? 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 remarkably easily and cost-effectively.

01 Small initial outlay thanks to low investment costs

02 Easy to program thanks to the intuitive operating concept

03 Reliable processing thanks to fully integrated image processing

04 Flexible processing thanks to different optics
01

**Small initial outlay**

thanks to low investment costs

Are you looking for the right machine to enter the world of laser welding with? Then look no further than the TruLaser Station 5005. This compact machine (including exhaust system) requires just 1 m² of space and, thanks to lower production costs, your investment pays off even if you are only producing a small volume of parts.

![TruLaser Station 5005](image)

Start small, think big: The TruLaser Station 5005 requires only 1 m² of space.

02

**Easy to program**

thanks to the intuitive operating concept

Make it easy for yourself: The panel PC on the TruLaser Station 5005 can help you do exactly that by letting you 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.

![Panel PC](image)

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

03

**Reliable processing**

thanks to 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](image)

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

Your work is varied – and the TruLaser Station 5005 is versatile. The system gives you the option to work with up to five axes when using BEO optics or with PFO scanner optics. You can be flexible in your choice of material too: plastics can be processed as well as metals thanks to the laser pyrometer.

![TruLaser Station 5005 with motorized swiveling optics](image)

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
TruMark Station

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

01
Maximum compatibility
Perfect for all TRUMPF marking lasers

02
Work in safety
thanks to laser protection and emissions extraction

03
Can be used anywhere
in the production line or as a single workstation

04
Make it big
thanks to lengthways transfer, even for large workpieces
01

Maximum compatibility
Perfect for all TRUMPF marking lasers

You have the freedom to choose: 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 – whilst staying flexible at all times.

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

02

Work in safety
thanks to laser protection and emissions extraction

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.

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.

04

Make it big
thanks to lengthways transfer, even for large workpieces

The TruMark Station 5000 is easy to slot 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 either.

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 the success of your production. We create opportunities together, so that you can use your TRUMPF laser systems optimally at all times and adjust to changes with flexibility. In us you will find a reliable partner who supports you with tailor-made solutions and service packages – so that you can produce economically and at a consistently high level, thus optimizing your value creation sustainably.

EMPOWER
If you wish to create the best conditions for successful manufacturing: We will support you in this.

SUPPORT
If flexibility and availability of equipment in day-to-day operations are essential to you: We are there for you.

IMPROVE
If you want to gradually focus your manufacturing on maximum value creation: We will work together to reach your goal.
Select the right scope of services for you with predictable costs – technical hotline, remote support, on-schedule maintenance, repairs including spare parts. You benefit from inexpensive package prices and lower processing outlay.

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 which solution is the most efficient in your case – in-person support on-site or problem-solving via remote support.

With our help you’ll be well on your way to finding your production’s hidden potential. For example, analyzing the design of your parts, your subprocesses, or your entire production. The results give us the data we need to help you develop selective or holistic solutions, for example for networked production.

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
# Technical data

## Technical data

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Axis positioning range</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X mm</td>
<td>300</td>
<td>800</td>
<td>3000</td>
<td>4000</td>
<td>3000</td>
</tr>
<tr>
<td>Y mm</td>
<td>300</td>
<td>600</td>
<td>1500</td>
<td>1500/2000</td>
<td>1500</td>
</tr>
<tr>
<td>Z mm</td>
<td>500</td>
<td>400 (+300)</td>
<td>700</td>
<td>750</td>
<td>600</td>
</tr>
<tr>
<td>B/C °</td>
<td>± 120/n x 360</td>
<td>± 135/n x 360</td>
<td>± 135/n x 360</td>
<td>± 135/n x 360</td>
<td>± 135/n x 360</td>
</tr>
<tr>
<td>Max. payload kg</td>
<td>30</td>
<td>400</td>
<td>250 (3D work table), 800 (2D/3D work table)</td>
<td>1600</td>
<td>300</td>
</tr>
</tbody>
</table>

| **Speed** | | | | |
| X/Y/Z m/min | 6 | 50 | 60 | 100 | 100 |
| Simultaneous m/min | 10 | 85 | 104 | 173 | 173 |
| B/C °/min | 15/200 | 120/400 | 60 | 90/90 | 90/90 |

| **Acceleration** | | | | |
| X/Y/Z m/s² | 0.5 | 10 | 5 | 9/10/10 | 10 |
| B/C °/s² | 65/160 | 125/500 | 200/100 | 200/100 | 200/100 |

| **Positioning deviation Pa** | | | | |
| Linear axes X/Y/Z mm | 0.1 | 0.015 (0.005)² | | |
| Rotational axes B/C ° | 0.1/0.2 | 0.02/0.02 | | |

| **Maximum positioning variation** | | | | |
| Linear axes X/Y/Z mm | | | | |
| Rotational axes B/C ° | | | | |

| **Maximum positioning deviation** | | | | |
| Linear axes X/Y/Z mm | | | | |
| Rotational axes B/C ° | | | | |

Subject to alteration. Only specifications in our offer and order confirmation are binding.
### TruLaser Station 5005
### TruLaser Cell 3000, 5030, 7040, 8030

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. laser power</td>
<td>W</td>
<td>1000</td>
<td>8000&lt;sup&gt;4&lt;/sup&gt;</td>
<td>2000–3000</td>
<td>6000&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Available lasers</td>
<td></td>
<td>TruDisk, TruPulse, TruDiode, TruFiber, TruMicro</td>
<td>TruDisk, TruPulse, TruDiode, TruFiber, TruMicro</td>
<td>TruDisk</td>
<td>TruFlow, TruDisk</td>
</tr>
</tbody>
</table>

| Rotating changer | | | | | |
| Diameter | mm | 870 | 4600 | 4000/4800 |
| Max. payload per side | kg | 95 | 750/1000 | 300 |
| Stations | Number | 2 | 2 | 2/3 |
| Rotation time | s | 3 | 3 | 2.3 |
| Total typical nonproductive time | s | 5.2 | 7 | 5 |

### TruLaser Cell 1100

| Technical data | | | | | |
| Axis positioning range | | | | | |
| X | mm | 300 x 500 |
| Z | mm | 300 x 500 |
| Q | mm | ± 25 |
| Positioning accuracy X/Z | mm | ± 0.1 |
| Positioning accuracy Q | mm | ± 0.05 |
| Max. laser power | W | 15,000 |
| Available lasers | | TruFlow, TruDisk, TruDiode |

<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.
# Technical data

## TruMark Station 1000, 3000, 5000, 7000

<table>
<thead>
<tr>
<th>Technical data</th>
<th>TruMark Station 1000</th>
<th>TruMark Station 3000</th>
<th>TruMark Station 5000</th>
<th>TruMark Station 7000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Available marking lasers</strong></td>
<td>TruMark Series 1000, 3000, TruMark 5010</td>
<td>TruMark Series 1000, 3000, 5000</td>
<td>TruMark Series 1000, 3000, 5000, 6000, TruMicro Mark Series 2000</td>
<td>TruMark Series 3000, 5000, 6000</td>
</tr>
<tr>
<td>Dimensions</td>
<td>mm</td>
<td>410 x 521 x 831</td>
<td>630 x 820 (desktop)/1750 (standalone) x 670</td>
<td>860 x 2000 x 1310</td>
</tr>
<tr>
<td>Weight (without laser)</td>
<td>kg</td>
<td>35</td>
<td>90 (desktop)/160 (standalone)</td>
<td>410</td>
</tr>
<tr>
<td>Electrical connection (voltage)</td>
<td>V</td>
<td>100/240</td>
<td>100/230</td>
<td>115/230</td>
</tr>
<tr>
<td>Electrical connection (frequency)</td>
<td>Hz</td>
<td>50/60</td>
<td>50/60</td>
<td>50/60</td>
</tr>
<tr>
<td>Electrical connection (amperage)</td>
<td>A</td>
<td>2.6 at 230 V</td>
<td>3/4/6/9/13</td>
<td>10/13/15/16/20</td>
</tr>
<tr>
<td>Max. power consumption</td>
<td>W</td>
<td>600</td>
<td>600</td>
<td>2550</td>
</tr>
<tr>
<td>Max. workpiece dimensions</td>
<td>mm</td>
<td>250 x 150 x 300</td>
<td>440 x 200 x 350</td>
<td>680 x 500 x 700</td>
</tr>
<tr>
<td>Max. workpiece weight</td>
<td>kg</td>
<td>5</td>
<td>12</td>
<td>50/25 (with X/Y axis)</td>
</tr>
<tr>
<td>Available axes</td>
<td></td>
<td>Z (manual)</td>
<td>Z</td>
<td>X</td>
</tr>
<tr>
<td>Max. travel</td>
<td>mm</td>
<td>150</td>
<td>200</td>
<td>300</td>
</tr>
<tr>
<td>Traveling speed</td>
<td>m/min</td>
<td>3</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Rotational axis</td>
<td>mm</td>
<td>65</td>
<td>65</td>
<td>65, 150</td>
</tr>
<tr>
<td>Door</td>
<td>Manual</td>
<td>Motorized</td>
<td>Motorized, available with rotary indexing table</td>
<td>Motorized</td>
</tr>
<tr>
<td>Exhaust system</td>
<td>External</td>
<td>Integrated, external possible</td>
<td>Integrated, external possible</td>
<td>Integrated, external possible</td>
</tr>
<tr>
<td>Laser safety class</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1, 4 possible</td>
</tr>
</tbody>
</table>

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## Technical data

<table>
<thead>
<tr>
<th></th>
<th>TruPrint 1000</th>
<th>TruPrint 3000</th>
<th>TruPrint 5000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Build volume (cylinder)</strong></td>
<td>Ø 100 x H 100</td>
<td>Ø 300 x H 400</td>
<td>Ø 300 x H 400</td>
</tr>
<tr>
<td></td>
<td>(Optional: Smaller installation space)</td>
<td>Ø 290 x H 400</td>
<td>(reduction, if preheating &gt; 200°C)</td>
</tr>
<tr>
<td><strong>Building materials</strong></td>
<td>Weldable metals in powder form such as: stainless steels, tool steels, aluminum&lt;sup&gt;2&lt;/sup&gt;, nickel-based, cobalt-chrome, copper, titanium&lt;sup&gt;2&lt;/sup&gt;, precious metal alloys&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Weldable metals in powder form such as: stainless steels, tool steels, aluminum, nickel-based, cobalt-chrome, titanium alloys</td>
<td></td>
</tr>
<tr>
<td><strong>Build rate</strong>&lt;sup&gt;3&lt;/sup&gt;</td>
<td>2–18</td>
<td>5–60</td>
<td>5–180</td>
</tr>
<tr>
<td><strong>Layer thickness</strong>&lt;sup&gt;4&lt;/sup&gt;</td>
<td>10–50</td>
<td>20–150</td>
<td>20–150</td>
</tr>
<tr>
<td><strong>Laser source</strong></td>
<td>200 fiber laser</td>
<td>500 fiber laser</td>
<td>3 x 500 fiber laser</td>
</tr>
<tr>
<td>(Option: Multi-laser 2 x 200 fiber laser)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Beam diameter</strong></td>
<td>50, optional 30</td>
<td>100–500&lt;sup&gt;4&lt;/sup&gt;</td>
<td>100–500</td>
</tr>
<tr>
<td><strong>Preheater</strong></td>
<td>–</td>
<td>&gt; 200 &gt; 500</td>
<td>&gt; 500</td>
</tr>
<tr>
<td><strong>O₂ concentration</strong></td>
<td>&gt; 3000 (0.3%), optional &gt; 100 (0.01%)</td>
<td>&gt; 100 (0.01%)</td>
<td></td>
</tr>
<tr>
<td><strong>Exposure speed (powder bed)</strong></td>
<td>m/s</td>
<td>Max. 3</td>
<td></td>
</tr>
<tr>
<td><strong>Protective gas</strong></td>
<td>Nitrogen, argon</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>230</td>
<td>400/460</td>
<td>400</td>
</tr>
<tr>
<td>V</td>
<td>A</td>
<td>7</td>
<td>50/60</td>
</tr>
<tr>
<td><strong>Dimensions (incl. filter)</strong></td>
<td>1445 x 730 x 1680</td>
<td>3385 x 1750 x 2070</td>
<td>4560 x 1628 x 2021</td>
</tr>
<tr>
<td>mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Weight (incl. filter, powder)</strong></td>
<td>650</td>
<td>4300</td>
<td>7085</td>
</tr>
<tr>
<td>kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Automation</strong></td>
<td>–</td>
<td>–</td>
<td>Process starts automatically</td>
</tr>
</tbody>
</table>

<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.  
<sup>4</sup> Dependent on system configuration, process parameters, raw material, and fill level.  
<sup>5</sup> Individually adjustable.  

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