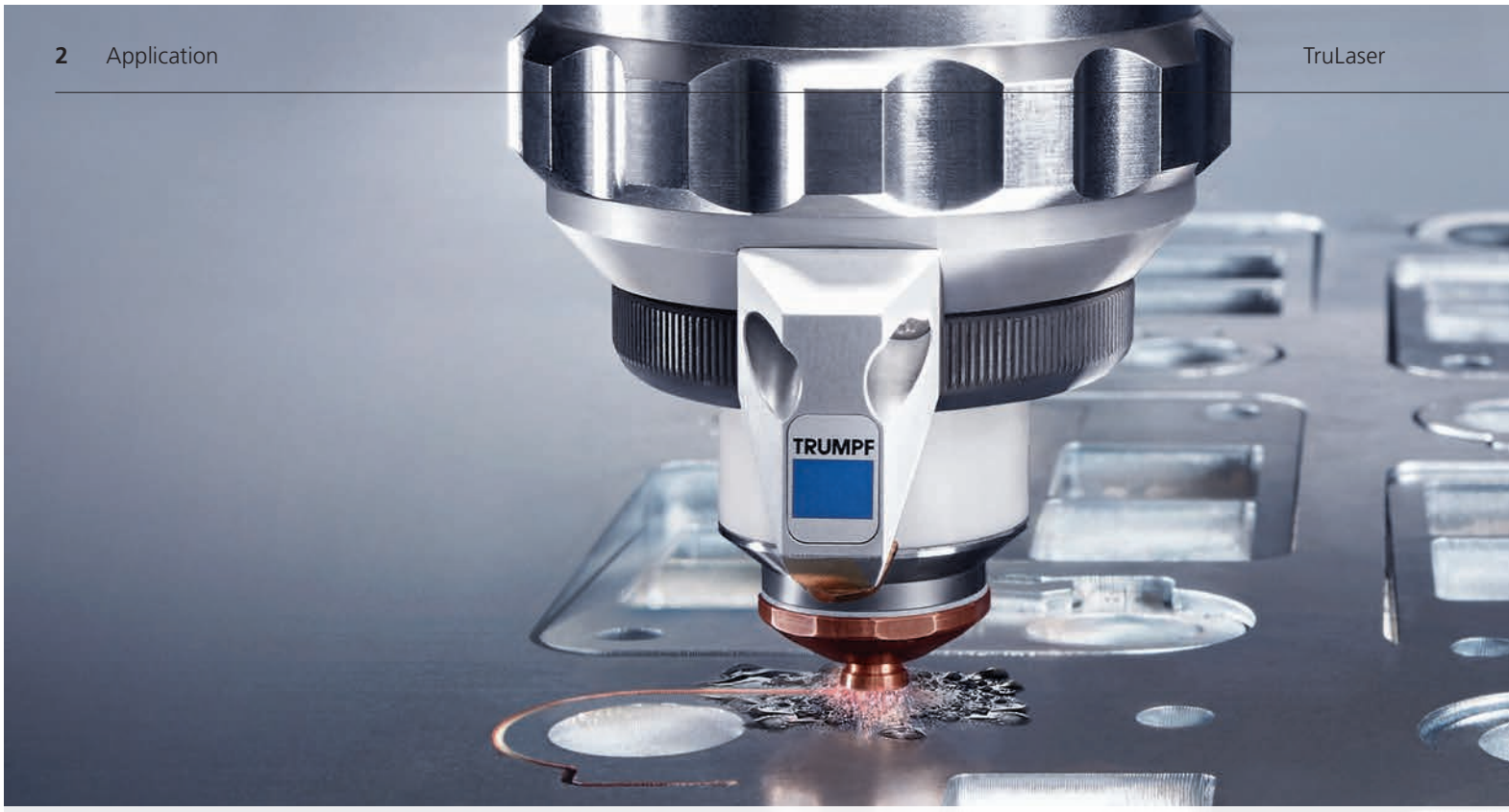

TRUMPF

TruLaser

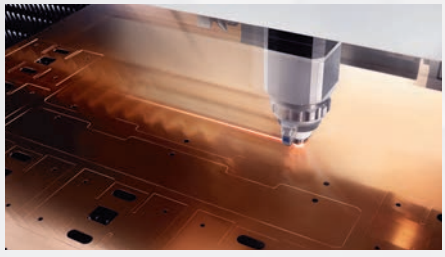
# Cost-effective cutting through thick and thin

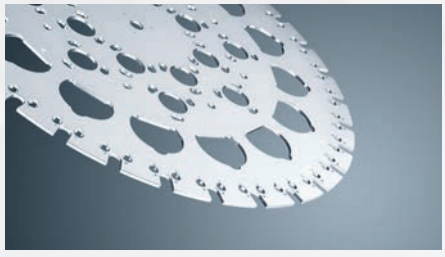


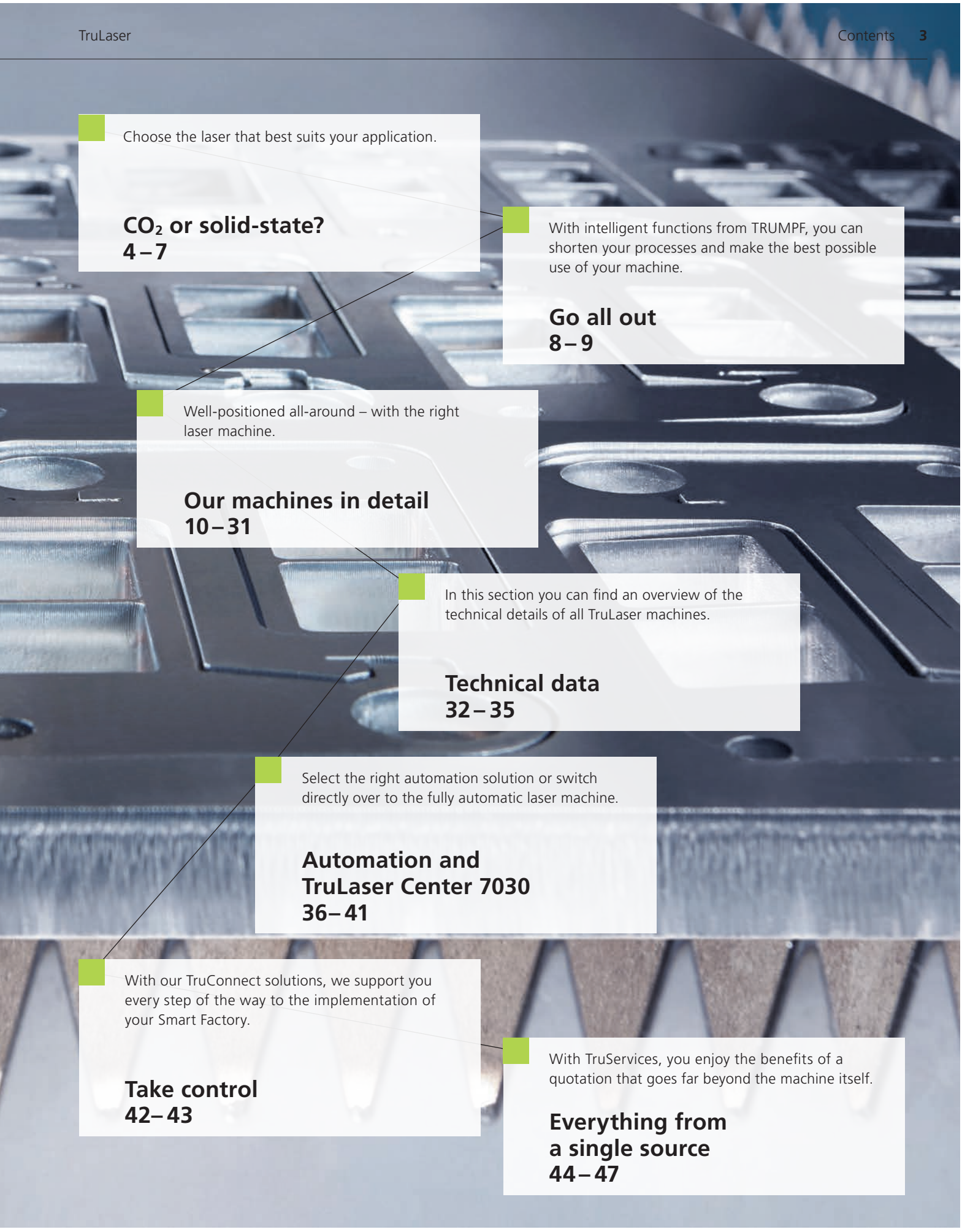

# The best solution for your application

There is a reason for the wide range of laser cutting machines available from TRUMPF: You should always be able to find the best solution for your application. In doing so, there are various considerations that affect your decision. What are your requirements for materials and quality? How high is your average capacity? What do you need to make your manufacturing as cost-effective as possible?

When developing our laser machines, we work on the basis of your requirements. This means more than simply concentrating on cutting time alone. With intelligent functions, we help you to achieve the best possible performance from your system. No matter which TRUMPF laser machine you choose – the bottom line is that you will receive a fully-integrated package: a machine, a laser, automation solutions, software – and the peace of mind that comes with a large, international service network.





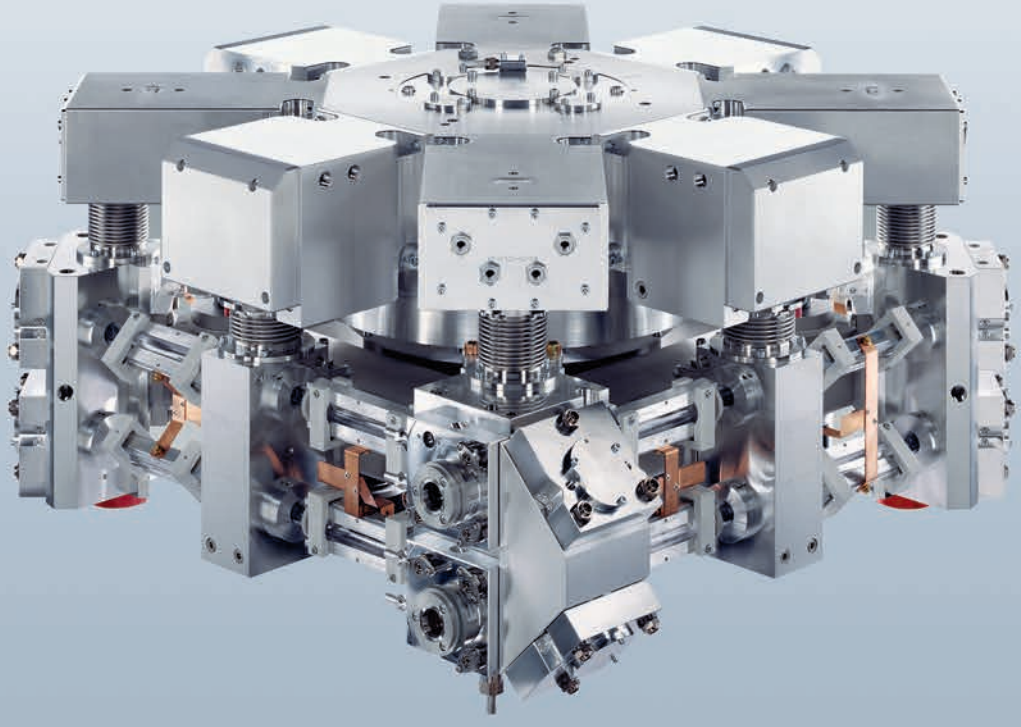


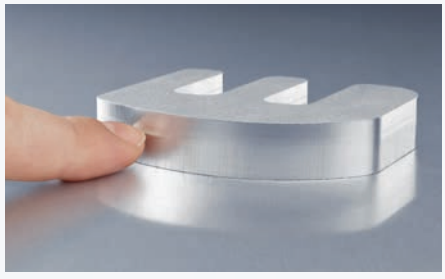
# $CO_2$ or solid-state?

There is no right or wrong answer to this question. The only factor to determine which laser machine is right for you is your specific application. Which materials and sheet thicknesses do you process? What are your customer's quality requirements? With TRUMPF, you can obtain precisely the right laser for your requirements.

## $CO_2$ lasers: Consistently perfect edges

$CO_2$ lasers are an established type of industrial laser, featuring high durability and robustness. The cut edges they produce are of such high quality that reworking is unnecessary. The reason for this is, that TruFlow lasers operate at a wavelength of 10.6 µm, ensuring edges without burrs and extremely low roughness depths which are therefore immediately ready for further processing.





## Areas of application

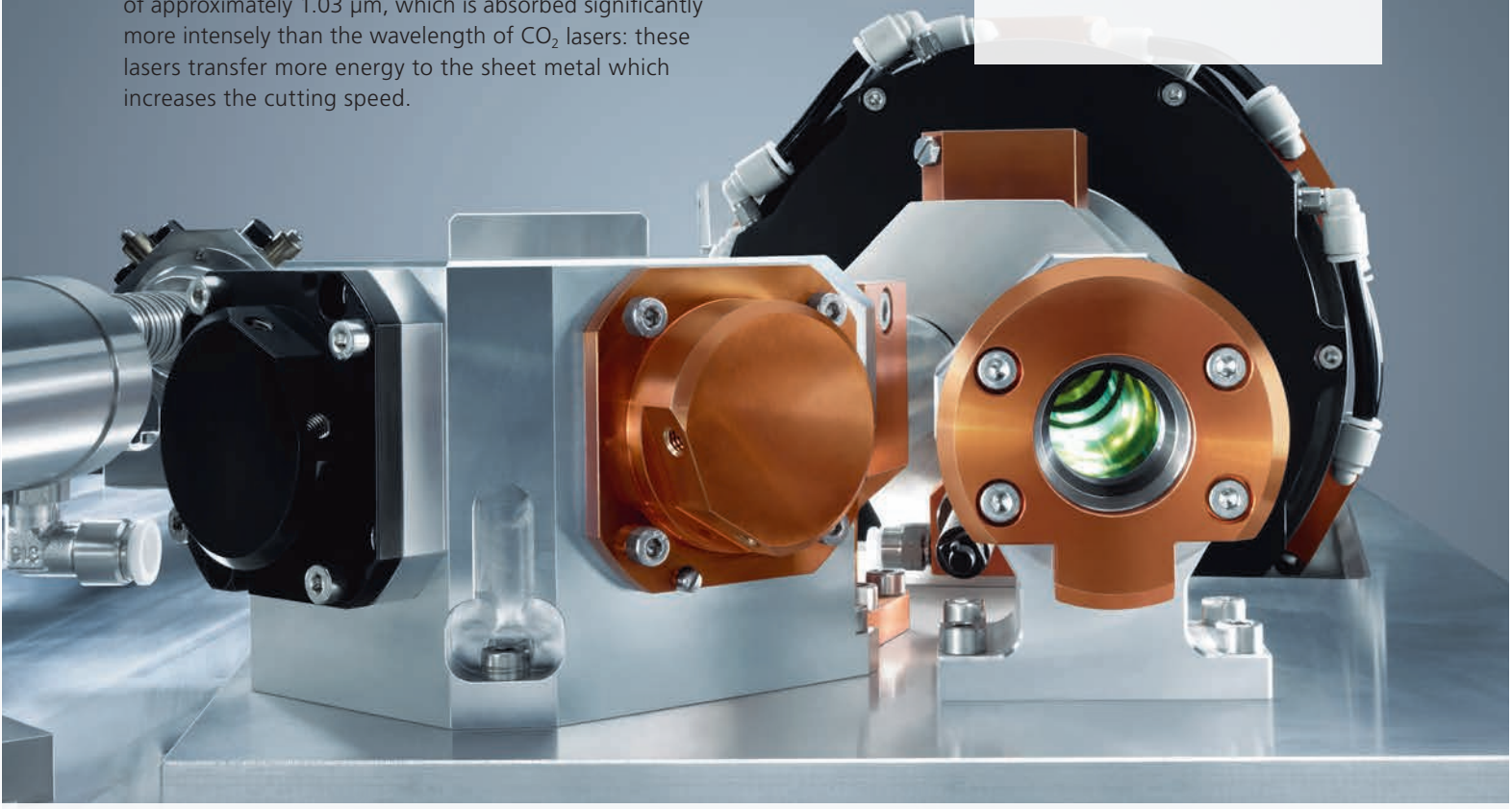
$CO_2$ lasers are particularly effective for any applications that require especially smooth and high-quality cut edges. They are the right choice for cutting edges that will be visible and where smooth edges matter for further processing of your part.

## Solid-state lasers: Highly productive all-rounders

TruDisk solid-state lasers enable you to cut productively. This is possible because they emit a beam with a wavelength of approximately 1.03 µm, which is absorbed significantly more intensely than the wavelength of $CO_2$ lasers: these lasers transfer more energy to the sheet metal which increases the cutting speed.

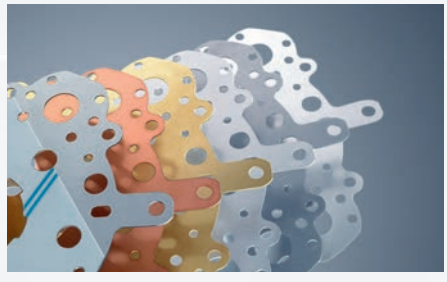
## The TRUMPF advantage

Lasers are complex high-tech products. In order to ensure that your beam source works in perfect harmony with your optics, machine and software, we develop and produce all components ourselves. This means you can always rely on an exceptionally well-integrated package and true expert advice.



## Areas of application

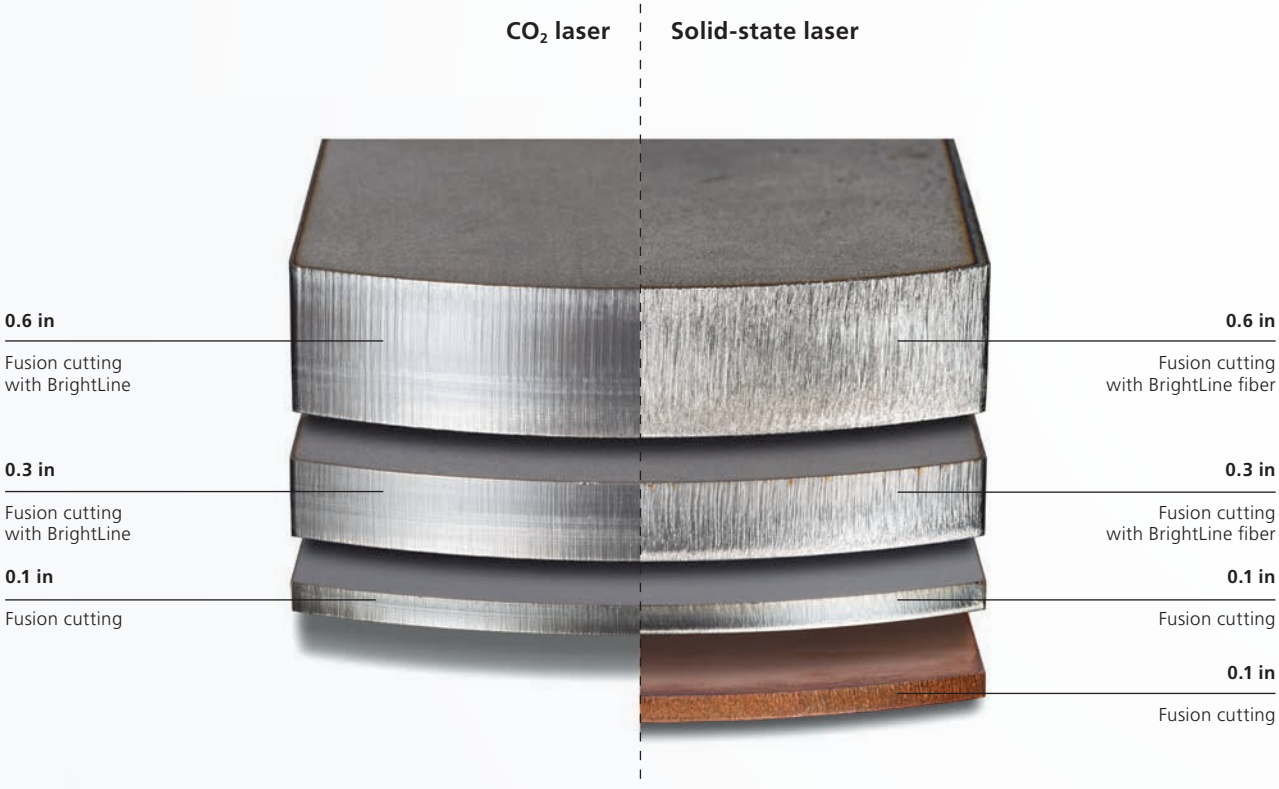
Unlike $CO_2$ lasers, solid-state lasers are also suitable for cutting copper or brass. When integrated into a laser network, your TruDisk can supply multiple machines. This increases the capacity of your laser and enables you to economically expand your equipment.



# Cut edges: Key differences

When selecting a laser, one requirement is often particularly important – the cut edge.
Consider these comparisons between edges:

## Stainless steel and non-ferrous metal

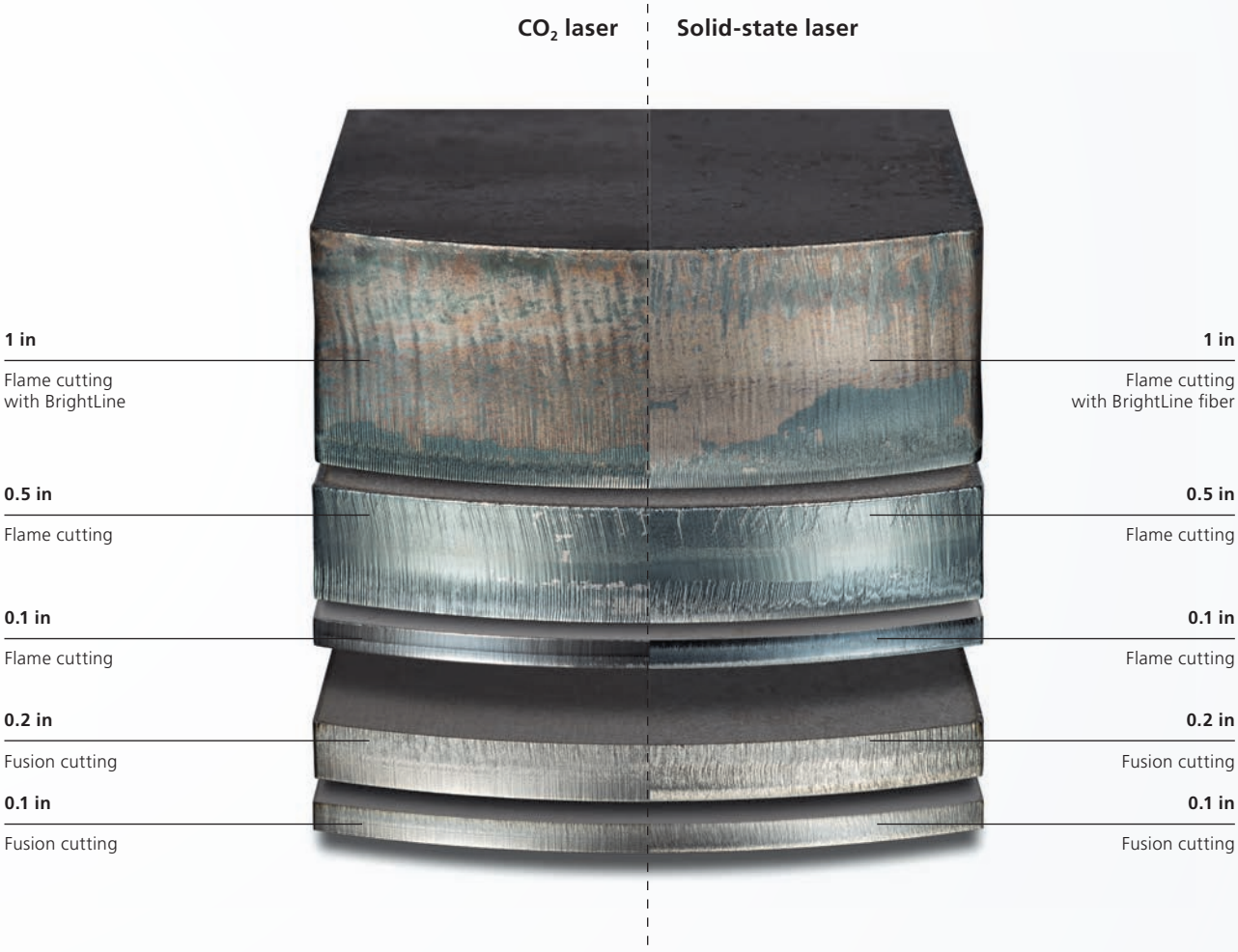



## The result:

**$CO_2$ laser:** Exceptional part quality with extremely smooth and partly reflective edges – with BrightLine for thick sheet metal, and without BrightLine for thin sheet metal. Virtually no burr formation.

**Solid-state laser:** Excellent part quality with thin sheet metal, assisted by BrightLine fiber with thicker sheet metal to ensure a consistent sectional view.

## Structural steel




## The result:

**$CO_2$ laser:** When flame cutting (with oxygen), both laser beam sources achieve the same level of quality. When fusion cutting (with nitrogen), the $CO_2$ laser delivers better edge quality than the solid-state laser.

**Solid-state laser:** A slight burr forms when fusion cutting.

Please note: In these part images, the underside is shown facing up. This provides you with a better view of the slight burr formations.

# Go all out

## Preparing

**How is my machine doing?**

The light on the **Condition Guide** shows you the status of important elements that affect the operation of the machine;
if necessary, the program provides you with recommended courses of action and generates predictions of when maintenance will be required.

TruConnect
Your Smart Factory

**Are my nozzles working properly?**

If not, this can lead to burr formation, resulting in rework and even scrap.
**Smart Nozzle Automation** switches to the correct nozzle and checks the nozzle status. This helps ensure reliability and saves you time.

**Is my sheet positioned correctly?**

This is important especially if you wish to cut prepunched sheets. With **DetectLine,** a camera system precisely determines the position of inserted sheets. This function also helps to check the focus position.

**Is my lens or protective glass contaminated?**

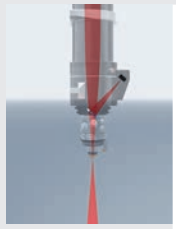
Spatter can contaminate the focusing lens of $CO_2$ machines. **LensLine** monitors your lens and switches off the beam if necessary. The benefit to you: Short downtimes for lens cleaning need only be scheduled when required, and you only need to replace a lens if it is truly necessary.

The **protective glass status check** ensures that you always know the condition of the protective glass of your solid-state laser and can cut with consistent quality.

## Producing

**Can I cut faster and save money at the same time?**

The **Highspeed Eco** technology enables you to double your sheet throughput and your feed rate, while reducing your cutting gas consumption by up to 70%. This makes nitrogen cutting with solid-state lasers extremely efficient.



**Is the focus of my laser set correctly?**

**Smart Beam Control** checks this for you. If necessary, it adjusts the position of the focus. This saves time and ensures that the process is reliable. A further advantage of this system is that it enables remote diagnosis of the cutting unit.

**How can I protect my cutting head?**

There is a particular danger of collision due to parts tipping up when cutting thin sheet metal. The **collision protection function** minimizes this – adding a layer of protection.

**Can I also cut thick structural steel?**

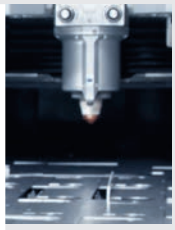
Yes – with **CoolLine,** even tight contours are possible. This function keeps your workpiece consistently cool during cutting. This enables you to cut even intricate parts and to nest workpieces even more tightly.

What good is having the fastest machine if your parts keep tipping up? With 2D laser cutting machines, downtime can quickly take up half of your working time. This downtime is spent setting up your machine, sorting parts or correcting errors. This is why it makes sense to shorten your entire process and permanently ensure that power is converted into output – with intelligent functions from TRUMPF.

## Sorting

**How can I prevent collisions?**

With **Smart Collision Prevention:** Your machine processes parts and inside contours in a sequence that intelligently takes into account and avoids tip-ups. This means you can carry out production reliably – without any collisions or microjoints.



**Best cuts - fast removal**

With **BrightLine,** your $CO_2$ laser can achieve the best edge quality when cutting stainless steel and structural steel. However, thanks to **BrightLine fiber,** solid-state lasers can also provide exceptionally high-quality cutting results across the entire range of sheet thicknesses and with no reduction in cutting speed. The optimized kerf makes part removal easier and saves sorting time.

**Changing cutting heads takes up too much time!**

Simply get rid of the process entirely: with the **single-cutting-head** strategy you can process any sheet thicknesses with a single cutting unit.

**Can I cut inferior material?**

**AdjustLine** automatically adjusts the cutting parameters to suit this situation. This enables you to cut even poor-quality material reliably, reducing scrap and material costs.

## Starting the subsequent process

**How can I identify my parts?**

Consider the next process step while still cutting: the **Dot Matrix Code** ensures that you always know which part you are working on and what subsequent processes are required.

TruConnect
Your Smart Factory

**I need to reproduce a part quickly**

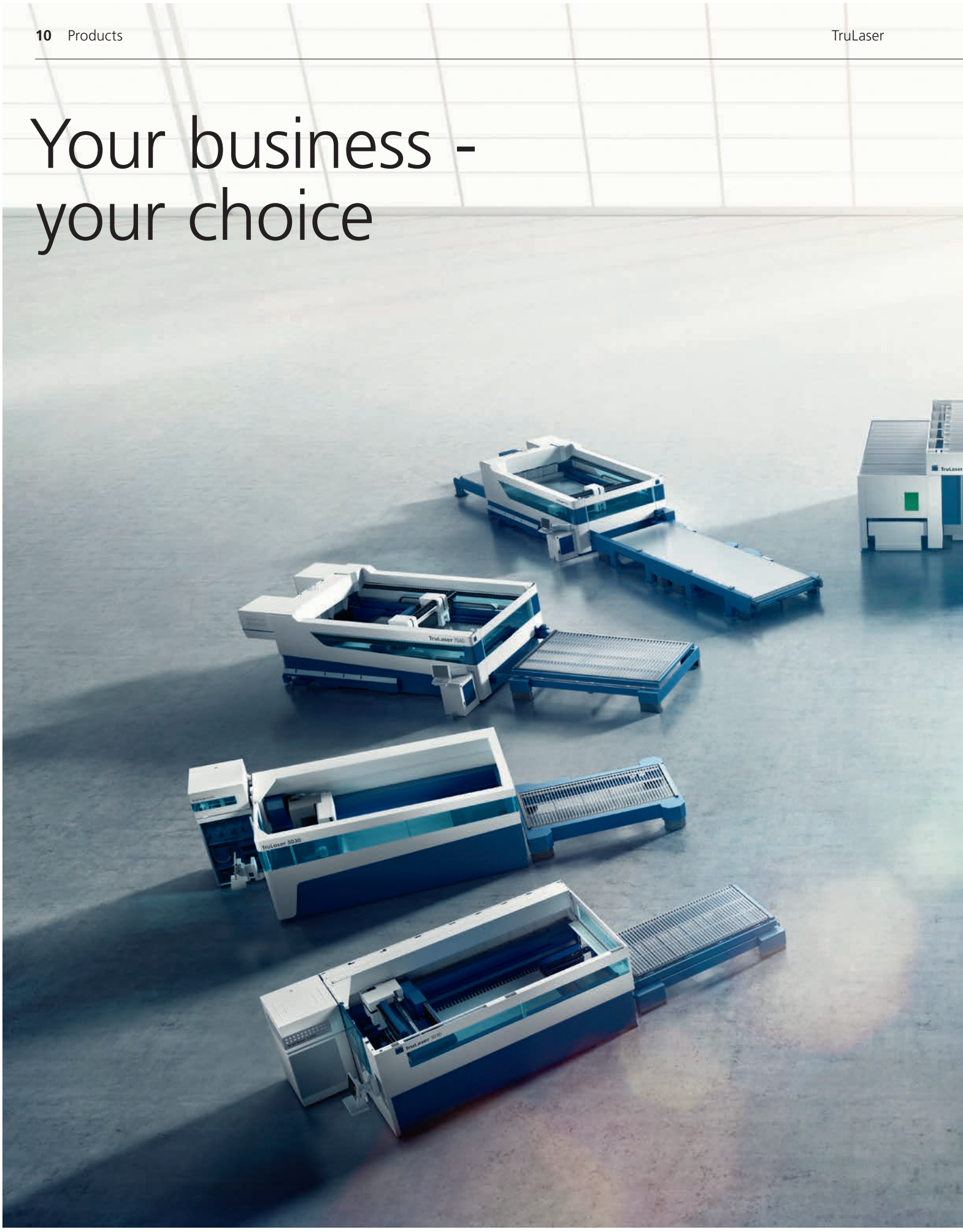
Speed and reuse of remnant sheet metal are key factors here. Thanks to the camera support offered by **Drop&Cut,** you can produce parts from existing programs in seconds. This enables you to reuse leftover sheet metal fast and easily.

**Inaccuracy at the pierce point?**

No, thanks! With **PierceLine** you can achieve precise pierce points with minimal distortion and reduce the time required to pierce the material to an absolute minimum. This increases the quality of the parts and reduces the processing time per part.

To find out which intelligent functions are available on which machine series, have a look at page 34 and 35.

# Your business - your choice



Choose the right laser machine, and use it to its full potential with a solution that gives you the boost you need to achieve the best possible performance. The entire process matters, not just the cutting operation. With TRUMPF you can get the right solution for your needs: consistent, unbeatably powerful, and built with exceptional passion.

# TruLaser Series 1000

01

## Versatile and productive

due to the solid-state laser and optimized cutting data for all materials

02

## Economical and efficient

due to energy efficiency and minimized setup times

Robust and cost-efficient laser machines – the machines from the TruLaser Series 1000 enable laser cutting with low investment and operating costs for the entire range of cutting applications. The TruLaser Series 1000 machines impress with their capability and ease of operation. The TruLaser Series 1000 is ready for Industry 4.0 and can connect to automated material handling and storage.


04

## Easy to operate and network

due to the touch display and Central Link

03

## Robust and reliable

with TruDisk laser and collision protection

01

## Versatile and productive

due to the solid-state laser and optimized cutting data for all materials

The machine can cut all materials and sheet thicknesses at the press of a button due to its single-cutting-head strategy. In particular, you can cut thin sheets very productively with the TruDisk laser. Even highly reflective materials such as copper and brass can be cut reliably. The BrightLine fiber function produces high-quality cutting edges in sheet thicknesses of up to 1 in.

You can even cut highly reflective materials, such as copper, easily and reliably with the TruLaser Series 1000.

A range of materials and sheet thicknesses showing high cutting quality with BrightLine fiber.

02

## Economical and efficient

due to energy efficiency and minimized setup times

The machine combines low investment and operating costs with a high level of productivity. Due to the efficient TruDisk laser and the optimized interaction of the laser and machine, the equipment works very economically. Functions such as the automatic nozzle changer, protective glass monitoring, and the pallet changer reduce your non-productive times. Due to the single-cutting-head strategy, you can cut various types and thicknesses of material without changing the cutting head.

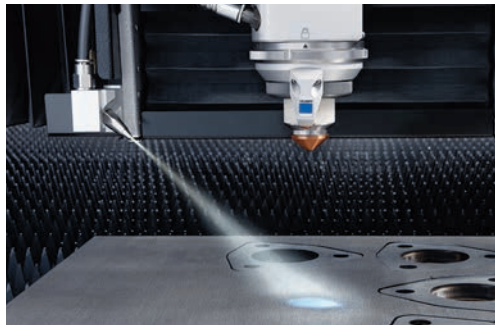

Save even more time with options such as the automatic nozzle changer.

03

## Robust and reliable

with TruDisk laser and collision protection

The TruDisk laser is impervious to back reflections and provides stable laser power over the entire machine life. The collision protection for your cutting head allows you to produce parts reliably. This minimizes your downtime and makes your machine more productive.



Oil spray device – targeted spraying of piercing points prevents crater formation in thick mild steel.

**Collision protection**

"Even if a collision occurs, your cutting head will remain undamaged, because it deflects upon contact. In the event of minor collisions, the cutting head pivots to the starting position automatically – this provides you with exceptional reliability and safety for your production processes."

Mark Bronski, TruLaser Product Manager


04

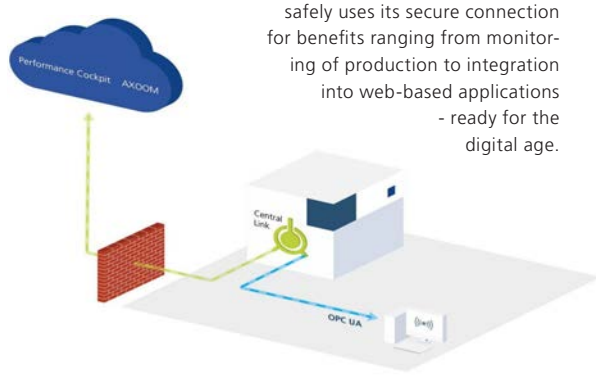
## Easy to operate and network

due to the touch display and Central Link

The menu navigation on the large touchpoint display works intuitively. Due to the reliable, integrated cutting parameters from TRUMPF, the machine is very easy to operate. With Central Link and automation options, you can create a digital and physical network.

The LiftMaster Compact loads and unloads your machine fully automatically. Expansion to the full portfolio of TRUMPF Automation Solutions is possible.

With Central Link, the machine safely uses its secure connection for benefits ranging from monitoring of production to integration into web-based applications - ready for the digital age.




Large view and easy to operate – the touchpoint display of the TruLaser Series 1000.

# TruLaser Series 2000


01

## Compact setup

due to low space requirements

02

## Intuitive operation

with touch control

03

## Productive cutting

with reduced nonproductive time

The compact TruLaser Series 2000 laser cutting machines combine minimum space requirements and ease of operation with high performance.

04

## Best cutting edges

due to BrightLine fiber

05

## Cost-effective growth

with the LaserNetwork

01

## Compact setup
due to low space requirements

If you are looking for a high-power product in a compact format, with a flexible layout and compact design, this laser cutting machine is made for you: simply select the setup that suits your requirements.


The compact design of the TruLaser 2030 fiber machine saves space. Its layout makes it extremely flexible and easily adaptable.

02

## Intuitive operation
with touch control

Thanks to the 19" intuitively designed touch display, you have easy access to all of the functions on your machine: A large viewing window provides an excellent overview of the entire working area and all processes – with complete safety.

The touch display simplifies functions for the operator.

03

## Profitable cutting
with reduced non-productive time

The TruLaser Series 2000 combines the advantages of a compact machine with the power of higher machine classes: With the TruDisk laser, you can cut very productively and reliably in the long term. Because the laser is impervious to back reflections, it is also possible to cut copper and brass. Depending on the power you need, choose the TruDisk Laser 2001, 3001 or 4001, with 2, 3 or 4 kW respectively.


Collision protection keeps the machine safe from tilted parts.

Replacing cutting nozzles by hand is a thing of the past: with the automatic nozzle changer, your machine can perform this task in a fraction of the time.

04

## Best cutting edges
due to BrightLine fiber

You can even create high-quality cutting edges in thick sheet with the BrightLine fiber technology. The optimized kerf makes part removal easier and saves time.

Win over your customers with thick sheet and cutting edges that shine.

**Impervious to back reflections**

"With our robust TruDisk laser, we can even cut reflective materials such as copper and brass reliably."

Jim Mozdzierz, R&D testing engineer

05

## Cost-effective growth
with the LaserNetwork

If you wish, your TruLaser 2030 fiber can open the door to other manufacturing processes for you. For example, it can make it much easier to get started with laser welding, since you can use your TruDisk as a beam source for other machines in a laser network. This feature even makes it possible to switch between applications every hour or every shift.


Your TruDisk can supply multiple machines in the LaserNetwork if desired. This enables you to get started with laser welding, for example.

# TruLaser Series 3000


01

## Limitless flexibility

in terms of format, power and options

02

## Go full throttle

while saving cutting gas

The machines of the TruLaser Series 3000 are truly well-rounded in laser cutting, and extremely flexible and reliable.


03

## High-quality cutting

in all sheet thicknesses

04

## Versatile automation

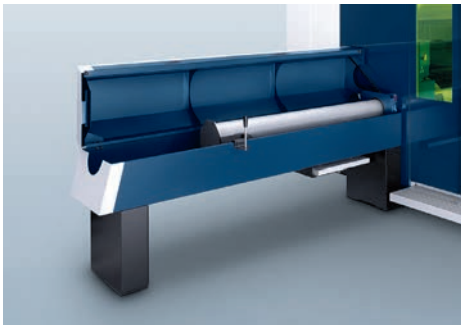
for an uninterrupted process chain

01

## Limitless flexibility

in terms of format, power and options

You can completely customize the layout of your machine to suit your needs: You can choose between large format (10 x 5 ft), max-format (12 x 6 ft) or even oversize format (20 x 8 ft). A transverse setup is also possible. You can likewise choose the laser power of 6 or 8 kW. With the RotoLas option, you can even process tubes directly on your 2D TruLaser 3030 or TruLaser 3040. The multisheet processing function allows your 2D laser machine to automatically cut multiple sheets one after the other on a single pallet.



RotoLas enables you to add tubes and profiles to the range of parts you can produce.

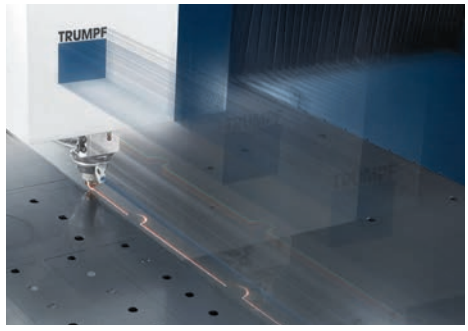
02

## Go full throttle

while saving cutting gas

Using Highspeed Eco, you can perform nitrogen cutting with the solid-state laser in record time: This method enables you to nearly double your feed rate and sheet throughput when processing medium and thick structural steel and stainless steel sheets. The new nozzle design increases speed by up to 40%. And if that's not enough, with Highspeed Eco you can reduce cutting gas consumption by up to 70%.

Save cutting gas with Highspeed Eco




Go full throttle and save gas: With Highspeed Eco, your cutting gas requirements are reduced by up to 70%, while your sheet throughput is increased by up to 100%.

03

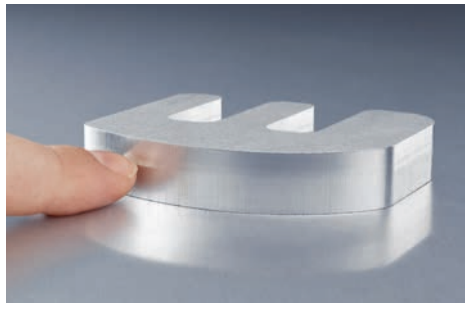
## High-quality cutting

in all sheet thicknesses

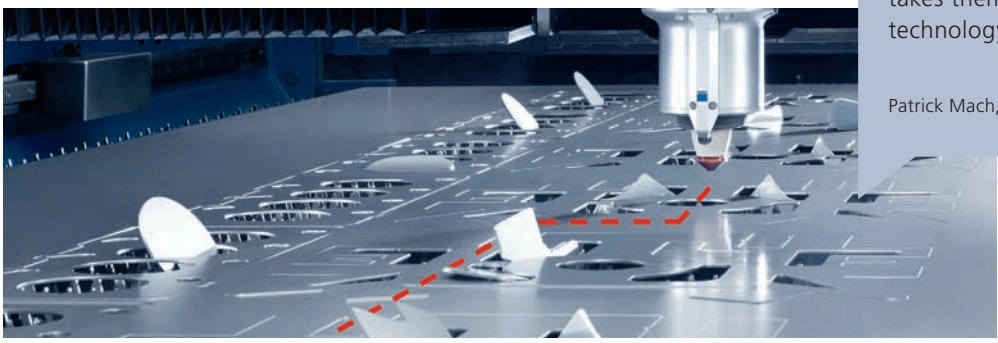
**BrightLine fiber** turns your solid-state laser into a universal tool: This function provides high-quality cutting edges in sheet thicknesses of up to 1 in, while still enabling you to enjoy all of the benefits of thin sheet processing with a solid-state laser, most notably high cutting speeds.

With BrightLine fiber, you can cut a wide variety of materials and sheet thicknesses with the best possible quality.

**BrightLine** makes the cutting process of your $CO_2$ laser perfect: Special cutting data and the BrightLine nozzle significantly improve the quality of your cut edges, particularly when processing thick stainless steel. BrightLine fusion cutting helps you to achieve edges you can see your reflection in – with no need for any rework.



BrightLine enables maximum cutting quality. The recognizable feature of this technology is the mirror edges.



**Smart Collision Prevention**

"Parts tipping up? Smart Collision Prevention takes them into account. As a result, this technology minimizes the risk of collisions."

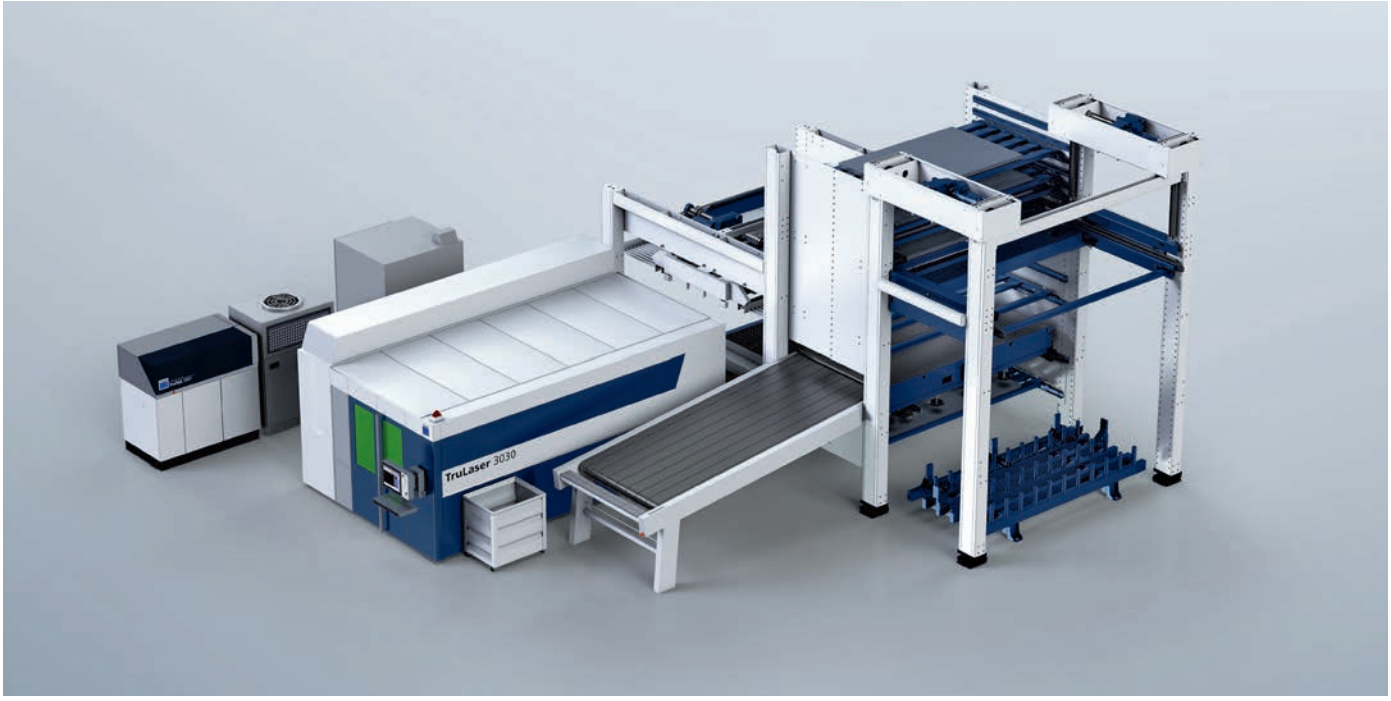
Patrick Mach, Development, Laser Cutting

04

## Versatile automation

for an uninterrupted process chain

With the right automation solution, you can optimize your process chain for specific requirements: Select the required components from a large modular system. From simple loading to fully automated loading and unloading including part separation and storage connection, everything is now possible with the TruLaser Series 3000.




A strong team: LiftMaster Compact automatically loads and unloads your machine. With the PartMaster, you can manually remove finished parts and skeletons from the transport belt with ease while production is in progress. More information on the topic of automation is available on pages 36 and 37.

# TruLaser Series 5000


01

**Maximum dynamics**

even with complex contours

02

**Optimized for process reliability**

even with fully automated operation

03

**Extremely fast**

with Highspeed Eco

The high-power products in the TruLaser Series 5000 set new standards for productivity and cost-effectiveness.


05

## Unrivaled efficiency

in terms of power and gas consumption

04

## Best part quality

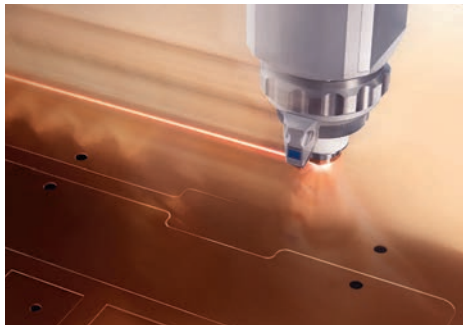
thanks to BrightLine fiber

01

## Maximum dynamics

even with complex contours

The productive machines in the TruLaser Series 5000 can effortlessly handle both thin and thick sheets. With the TruDisk 10001 and highly dynamic drives, they enable productive and reliable manufacturing across the entire range of sheet thicknesses. The machines in this series are designed for maximum productivity and are able to convert these high feed rates into sheet throughput.



With the 10 kW TruDisk 10001 laser, you can process a wide range of materials and thicknesses in the best possible quality with even higher productivity.

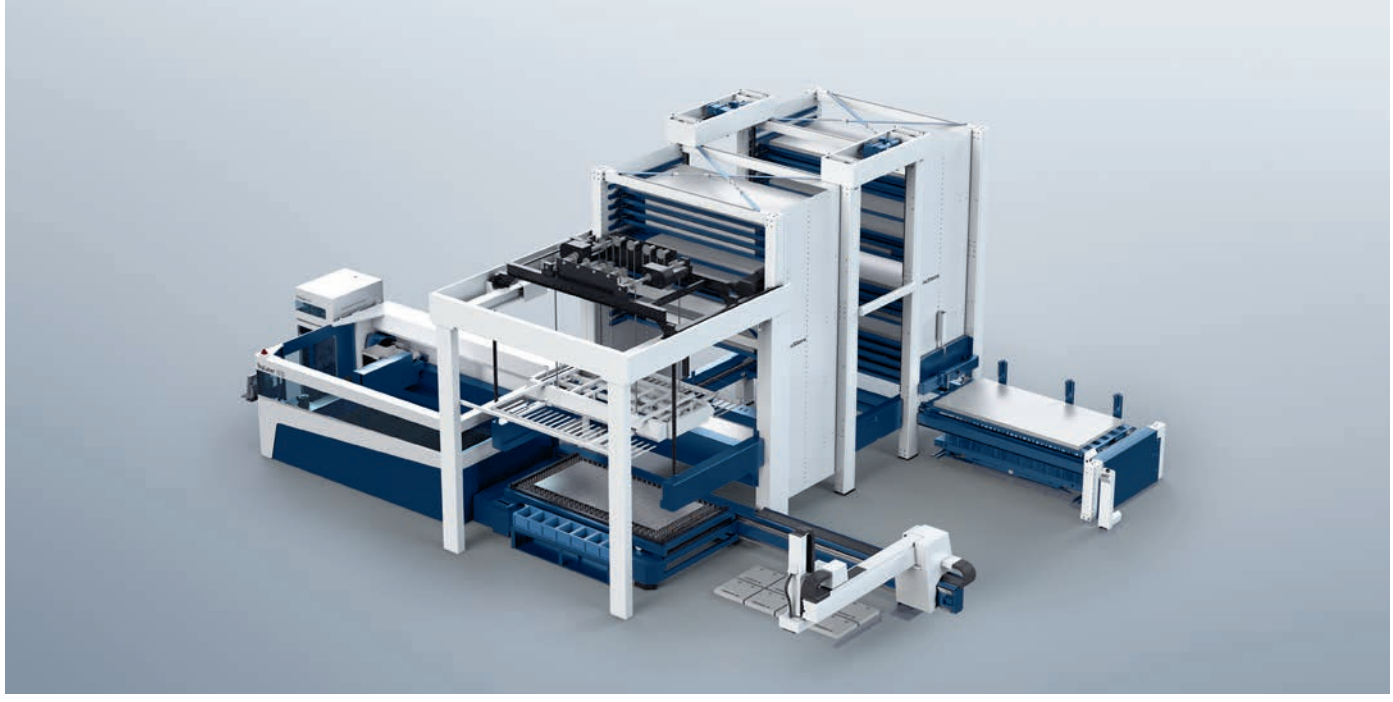
02

## Producing with process reliability

even with fully automated operation

Ensuring that the nozzle is in the best possible condition is an important prerequisite for achieving reliable processes and high part quality. Smart Nozzle Automation with Quick Swap enables the swapping of nozzles in the nozzle changer even while the machine is cutting.
With the CoolLine function, you can perform intricate cutting operations, even in thick structural steel. This function cools the workpiece during cutting and enables new geometries, more efficient nesting, and reliable processing of thick structural steel.


Automated nozzle inspection to detect deformation of the nozzle holes using a camera and image processing system.

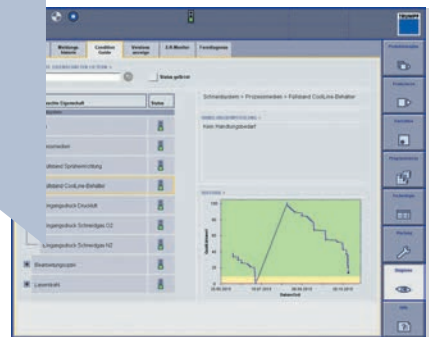


LiftMaster Store connects the TruLaser 5030 directly to a TruStore 3030 and a SortMaster. More information on the topic of automation is available on pages 36 and 37.

**Condition Guide**

"How is your machine doing? You can find out at a glance: the light in the Condition Guide shows the status of important elements that could affect the cutting capability of the machine."

Andreas Vollmer, TruLaser technology expert from the demonstration center



03

## Extremely fast

with Highspeed Eco

The Highspeed Eco cutting process enables you to get even better performance from your laser machine. Cutting with nitrogen, this method enables you to nearly double your feed rate and sheet throughput when processing medium and thick structural steel and stainless steel sheets, without any reduction in quality: Highspeed Eco even prevents burr formation on contours with sharp edges.


Highspeed Eco: Up to 100% higher productivity and up to 70% less cutting gas consumption.

04

## Best part quality

thanks to BrightLine fiber

BrightLine fiber combines special optics with flow-optimized BrightLine nozzles and the dual core 2-in-1 cable. As a result you achieve the best part quality. The high-quality cut edges ensure that your parts do not get caught during removal, saving you a great deal of time.


Simple part removal included: BrightLine fiber.

05

## Unrivaled efficiency

in terms of power and gas consumption

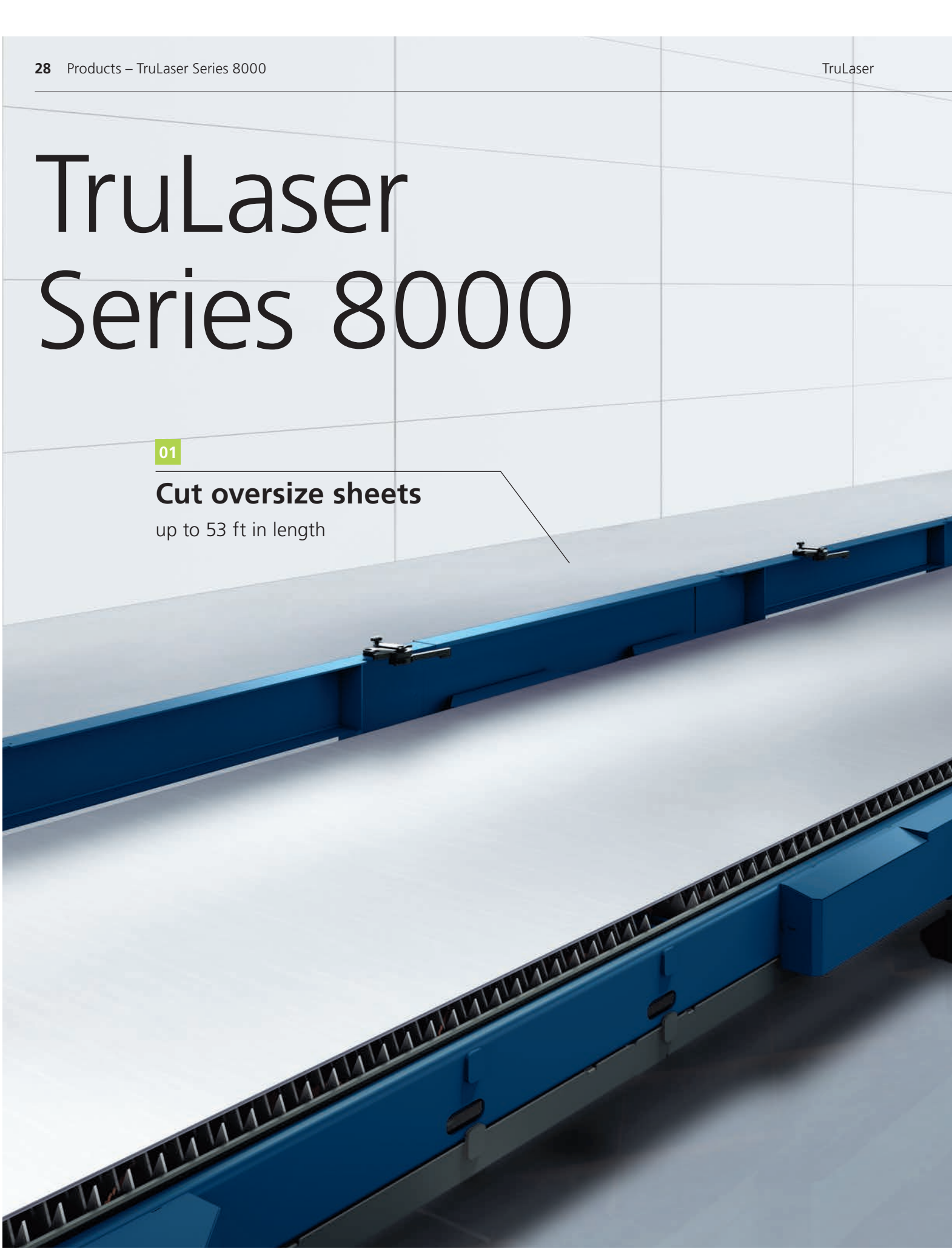
With an efficiency rate of over 30%, the energy consumption of a TruDisk solid-state laser is exceptional. The Highspeed Eco function helps you to achieve cutting gas savings of up to 70% – thanks to a patented nozzle design.

# TruLaser Series 8000

01

## Cut oversize sheets

up to 53 ft in length



The flexible laser machines in the TruLaser Series 8000 guarantee you maximum cost-effectiveness and excellent part quality when processing oversize sheets.


04

## Variable pallet concept

adjusts to meet your needs

03

## Double your productivity

with two cutting heads

02

## Perfect alignment

with sheet cycling

01

## Cut oversize sheets

up to 53 ft in length

Break through into new dimensions: With the TruLaser Series 8000 you can process sheets up to 53 ft x 8 ft in size. These machines also offer all the benefits of a machine for standard sheets, particularly in terms of flexibility. For sheets of up to 53 ft in length, you can use the unique additional pallet concept, which provides the right solution for every application area through the combination of a 12-ft pallet changer with an oversize pallet.


Chamfered profile cut on a TruLaser Series 8000.

02

## Perfect alignment

with sheet cycling

Sheets up to 53 ft in length are moved through the 12 ft long and 8 ft wide working area of the machine in several steps. A rigid machine frame, high-precision measurement systems, and linear drives on all axes ensure you have the best part quality and perfectly aligned cutting results.

03

## Double your productivity

with two cutting heads

You can achieve peak productivity with two cutting heads working simultaneously – productivity increases of up to 100% are possible. With this concept, each cutting head of your $CO_2$ machine is supplied by a separate TruFlow laser and can be switched on and off independently.

TruLaser 8000 and TruBend 8000: Laser cutting and bending of oversize sheets.

**CoolLine**

"One cool thing: With the smart CoolLine function you can cut intricate contours, even in thick structural steel."

Mark Bronski, TruLaser Product Manager

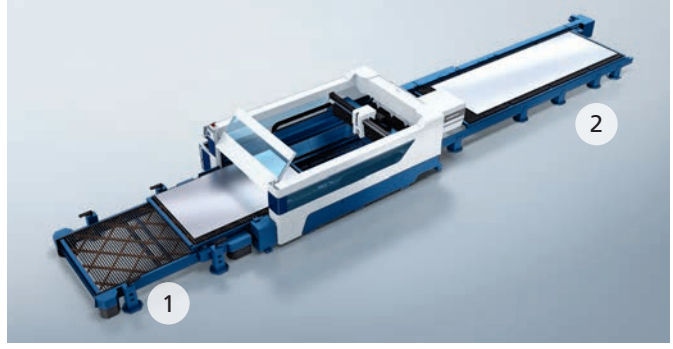
04

## Variable pallet concept

adjusts to meet your needs

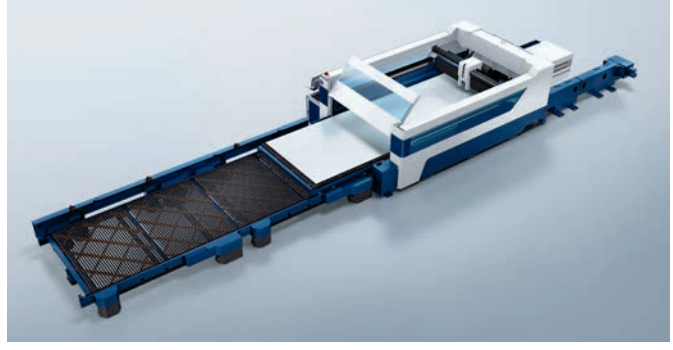
Various pallet changer options are available to meet your specific oversize requirements: Select the oversize sheet additional pallet for high productivity in standard sheet sizes and maximum flexibility for oversize sheets of up to 53 ft in length. Or select the oversize sheet pallet changer, which provides you with maximum productivity with oversize sheets of up to 40 ft in length thanks to loading and unloading while production is in progress.

Perfect for an oversize sheet - proportion **of up to approximately 40%:**
For standard sheets of up to 12 ft in length, use the pallet changer (1) and automation for the highest level of productivity. You can increase your flexibility by using the additional pallet (2) for sheets of up to 53 ft in length.




Flexibility provided by the additional pallet for oversized sheets.

Perfect for an oversize sheet - proportion **from approximately 40%:**
Achieve maximum productivity with oversized sheets of up to 40 ft in length through loading and unloading parallel to production. With the fast oversize sheet pallet changer, you can achieve the shortest cycle times. You can also produce cost-effectively in unattended operation with maximum process reliability.



A high level of productivity provided by the oversize sheet pallet changer.

# Technical data

We have summarized the technical data for the following TruLaser machines for you on these pages.

| **Technical data** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | **TruLaser 1030 fiber** | **TruLaser 1040 fiber** | **TruLaser 2030 fiber** | **TruLaser 3030** | **TruLaser 3040** | **TruLaser 3030 fiber** | **TruLaser 3040 fiber** |
| **Maximum format size that can be processed** | | | | | | | | |
| X-axis | in | 120 | 160 | 120 | 120 | 160 | 120 | 160 |
| Y-axis | in | 60 | 80 | 60 | 60 | 80 | 60 | 80 |
| Z-axis | in | 4.5 | 4.5 | 3 | 4.5 | 4.5 | 4.5 | 4.5 |
| **Workpiece** | | | | | | | | |
| Max. weight | lbs | 1,980 | 3,740 | 1,980 | 1,980 | 3,740 | 3,960[5] | 7,270[5] |
| **Max. speed** | | | | | | | | |
| Simultaneous | in/min | 5,500 | 5,500 | 5,500 | 5,500 | 5,500 | 6,690 | 6,690 |
| **Accuracy**[1] | | | | | | | | |
| Positioning deviation $P_a$ | in | 0.002 | 0.002 | 0.004 | 0.002 | 0.002 | 0.002 | 0.002 |
| Average positioning scatter band $P_{s\,max}$ | in | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| Cycling repeat accuracy | | – | – | – | – | – | – | – |
| Positioning accuracy | | – | – | – | – | – | – | – |
| Available lasers | | TruDisk 2001 / 3001 / 4001 | TruDisk 2001 / 3001 / 4001 | TruDisk 2001 / 3001 / 4001 | TruFlow 3200 / 4000/ 5000 / 6000 | TruFlow 3200 / 4000/ 5000 / 6000 | TruDisk 6001 / 8001 | TruDisk 6001 / 8001 |

| **Laser data** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **TruLaser Series 1000 fiber** | | | **TruLaser Series 2000 fiber** | | | **TruLaser Series 3000 / 5000** | | | |
| | | TruDisk 2001 | TruDisk 3001 | TruDisk 4001 | TruDisk 2001 | TruDisk 3001 | TruDisk 4001 | TruFlow 3200 | TruFlow 4000 | TruFlow 5000 | TruFlow 6000 |
| Max. power | W | 2000 | 3000 | 4000 | 2000 | 3000 | 4000 | 3200 | 4000 | 5000 | 6000 |
| Wavelength | µm | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 10.6 | 10.6 | 10.6 | 10.6 |
| **Max. sheet thickness** | | | | | | | | | | | |
| Structural steel | in | 0.6 | 0.8 | 0.8/ 1.0[3] | 0.6 | 0.8 | 0.8/ 1.0[3] | 0.8 | 0.8 | 1.0 | 1.0 |
| Stainless steel | in | 0.3 | 0.6 | 0.8 | 0.3 | 0.6 | 0.8 | 0.5 | 0.6 | 0.8 | 1.0 |
| Aluminum | in | 0.2 | 0.6 | 0.6 / 0.8[3] | 0.2 | 0.5 | 0.6 / 0.8[3] | 0.3 | 0.4 | 0.5 | 0.6 |
| Copper | in | 0.1 | 0.2 | 0.3 | 0.1 | 0.2 | 0.3 | – | – | – | – |
| Brass | in | 0.1 | 0.2 | 0.3 | 0.1 | 0.2 | 0.3 | – | – | – | – |
| **Power consumption** | | | | | | | | | | | |
| Average power consumption during production | kW | 12 | 13 | 14 | 12 | 13 | 14 | 29 | 31 | 35 | 38 |

[1] The positioning accuracy data relates to the entire working length. The positioning accuracy is recorded in a production plant in accordance with VDI/DGQ 3441.
[2] Data relates to a single pallet. The maximum weight for two pallets deviates from the data given here. [3] With BrightLine fiber. [4] 1.2 in for the TruLaser Series 3000 fiber; 1.6 in for the TruLaser Series 5000 fiber. [5] With 8 kw Laser.

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

| TruLaser 3060 fiber | TruLaser 5030 | TruLaser 5040 | TruLaser 5060 | TruLaser 5030 fiber | TruLaser 5040 fiber | TruLaser 5060 fiber | TruLaser 8000 |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 240 | 120 | 160 | 240 | 120 | 160 | 240 | 630 |
| 100 | 60 | 80 | 80 | 60 | 80 | 80 | 100 |
| 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4 |
| | | | | | | | |
| 10,800[5)] | 3,960 | 7,050 | 10,580 | 3,960[2)5)] | 7,270[2)5)] | 10,800[5)] | Depending on the selected pallet concept |
| | | | | | | | |
| 6,690 | 11,800 | 11,800 | 11,800 | 11,140 | 11,140 | 11,140 | 11,960 |
| | | | | | | | |
| 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| – | – | – | – | – | – | – | ± 0.1 |
| – | – | – | – | – | – | – | ± 0.2 |
| TruDisk 4001 / 6001 / 8001 | TruFlow 6000 | TruFlow 6000 | TruFlow 6000 | TruDisk 8001 / 10001 | TruDisk 8001 / 10001 | TruDisk 8001 / 10001 | TruFlow 4000 / 6000 |

| TruLaser Series 3000 / 5000 fiber | | | TruLaser Series 5000 fiber | TruLaser Series 8000 | |
|---|---|---|---|---|---|
| TruDisk 4001 | TruDisk 6001 | TruDisk 8001 | TruDisk 10001 | TruFlow 4000 | TruFlow 6000 |
| 4000 | 6000 | 8000 | 10000 | 4000 | 6000 |
| 1.03 | 1.03 | 1.03 | 1.03 | 10.6 | 10.6 |
| | | | | | |
| 0.8/ 1.0[3)] | 1.0 | 1.0 | 1.2 | 0.8 | 1.0 |
| 0.8 | 1.0 | 1.6[4)] | 1.6 | 0.6 | 1.0 |
| 0.6 / 0.8[3)] | 1.0 | 1.0 | 1.0 | 0.4 | 0.6 |
| 0.3 | 0.4 | 0.4 | 0.6 | – | – |
| 0.3 | 0.4 | 0.4 | 0.5 | – | – |
| | | | | | |
| 14 | 18 | 20 | 25 | 31 | 38 |

# Intelligent functions

Which intelligent functions are available on which machine series?
This table provides you a simple overview.

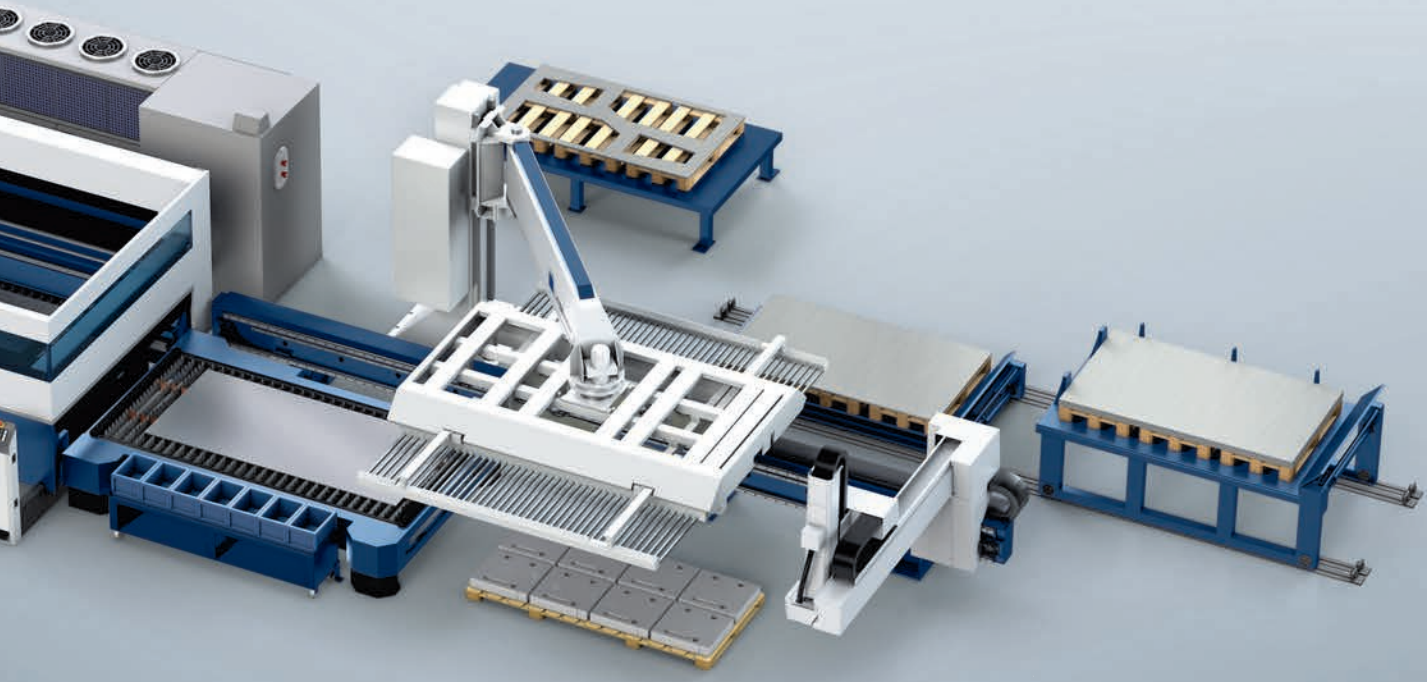
| |  |  |
|---|---|---|
| **Laser** | **TruLaser Series 1000**<br>Solid-state | **TruLaser Series 2000**<br>Solid-state |
| **AdjustLine** | ■ | |
| **BrightLine** | | |
| **BrightLine fiber** | ■ | ■ |
| **Condition Guide** | ■ | |
| **CoolLine** | | |
| **DetectLine** | ■ | |
| **Dot Matrix Code** | ■ | |
| **Drop & Cut** | ■ | |
| **Single-cutting-head strategy** | ■ | ■ |
| **Highspeed** | | |
| **Highspeed Eco** | | |
| **Collision protection** | ■ | ■ |
| **LensLine** | | |
| **Online condition checking, protective glass** | ■ | |
| **PierceLine** | ■ | ■ |
| **Smart Beam Control** | | |
| **Smart Collision Prevention** | | |
| **Smart Nozzle Automation** | | |

| **TruLaser Series 3000** | | **TruLaser Series 5000** | | **TruLaser Series 8000** |
|---|---|---|---|---|
| $CO_2$ | Solid-state | $CO_2$ | Solid-state | $CO_2$ |
| ■ | ■ | ■ | ■ | ■ |
| ■ | | ■ | | ■ |
| | ■ | | ■ | |
| ■ | ■ | ■ | ■ | |
| ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | |
| ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ |
| | ■ | | ■ | |
| | ■ | | ■ | |
| ■ | ■ | ■ | ■ | ■ |
| ■ | | ■ | | ■ |
| | ■ | | ■ | |
| ■ | ■ | ■ | ■ | ■ |
| | | | ■ | |
| ■ | ■ | ■ | ■ | |
| | | ■ | ■ | |

# Automation is worth it

Automated, your TruLaser cutting machine works even more productively. Select from a large variety of modular automation components. This provides you with a solution tailored precisely to your needs, ranging from semiautomatic loading to a fully automated machine with a storage connection.


| Automation functions | Loading | Loading and unloading | |
|---|---|---|---|
| | **LoadMaster** | **LiftMaster Compact** | **LiftMaster Linear Basic** |
| **Combinable machines** |  |  |  |
| TruLaser Series 1000 | | ■ | ■ |
| TruLaser Series 2000 | | | |
| TruLaser Series 3000 | ■ | ■ | ■ |
| TruLaser Series 5000 | ■ | ■ | ■ |
| TruLaser Series 8000 | ■ | | |



Regardless of the extent to which you wish to automate your processes: you can find the right solution for your production processes on our website and in the automation catalog: **www.trumpf.info/zqi2wh**

| Loading and unloading/part sorting | | | | Auxiliary pallet operation | Storage system |
|---|---|---|---|---|---|
| **LiftMaster** | **LiftMaster Linear** | **LiftMaster Store**<br>**LiftMaster Store Linear** | **SortMaster** | **PalletMaster Tower** | **TruStore** |
|  |  |  |  |  |  |
| ■ | ■ | ■ | | | ■ |
| | | | | | |
| ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | | | | | ■ |

# TruLaser Center 7030

The first fully automatic laser. Takes care of everything – from the drawing to sorted parts.


**Thinking outside the box**
We have fundamentally questioned the entire process of laser processing. The result? A groundbreaking machine concept combining productivity and process reliability.

**Hitting the ground running**
Unlike conventional 2D laser machines, the TruLaser Center 7030 moves the sheet as well as the cutting head. With the additional axis on the cutting head, this machine achieves peak values in terms of cutting dynamics. The result is overlapping axis movements that make your machine extremely productive. Equipped with a laser power of 6 kW, this enables you to cut sheets with a thickness of up to 0.5 in. in a highly dynamic manner.

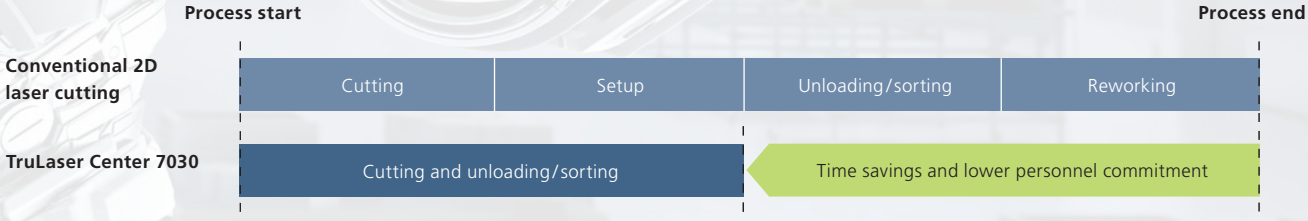
**Intelligent automation**
This fully automatic machine guarantees reliable part handling thanks to built-in intelligence with automation solutions such as SmartGate, SmartLift and SortMaster Speed. This eliminates the possibility of workpieces tipping up or tilting and the need to use microjoints.

**Producing around the clock**
Connect the TruLaser Center 7030 to your storage and profit from a higher machine utilization rate because of the optimized material flow and lower material access time. The machine takes care of tedious work steps around the clock – this saves manpower and relieves the strain on employees.

# Quick
# Reliable
# Intelligent
# Independent

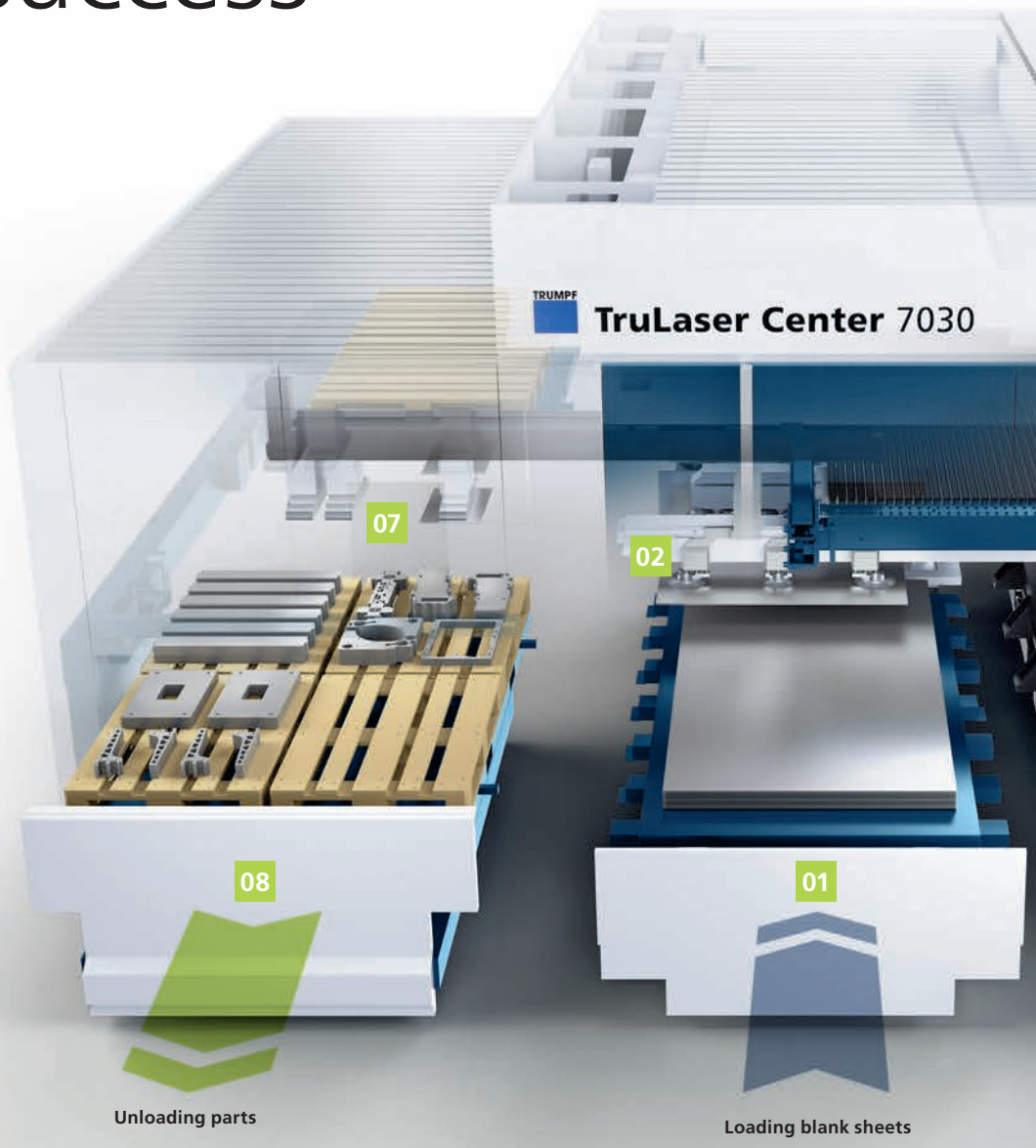
**Short video: Simple explanation**
Waiting until parts and scrap are sorted out of the pallet? Downtime due to parts tipping up? Rework? With this fully automatic machine these typical challenges are a thing of the past.
www.trumpf.info/gabuym

**A comparison of the process steps**




**The result: the TruLaser Center 7030 takes care of all processes involving laser cutting safely and reliably – reducing your processing costs considerably.**

# Working in perfect harmony for your success




**Programming a job**
At the press of a button, the TruTops Boost programming software calculates a comprehensive suggestion for cutting, part separation, sorting and storing - fully automatically.

**Loading blank sheets**
The loading cart **(01)** can be loaded with blank sheets while production is in progress. The LoadMaster Center **(02)** places blank sheets on the brush table into the clamping unit. Powerful peeling technologies reliably separate sheets from the stack.

**Cutting parts**
The clamping unit moves the sheet in the Y-direction, the cutting unit **(03)** processes it in the X-direction and also processes it highly dynamically in the Y-direction via an additional axis. The SmartGate provides support while cutting.

Laser manufacturing is most economical with a machine where all steps are connected. The TruLaser Center 7030 impresses with its close interaction between integrated intelligence and new automation solutions.


Unloading skeletons

**Take a look:**
This is how the TruLaser Center 7030 works:
www.trumpf.info/xvnp0u

**Discharging parts and scrap**
The intelligent SmartGate **(04)** reliably discharges slugs, scrap, and small parts. The sorting diverter separates good parts from scrap. Good parts are sorted into up to eight containers **(05)**. Scrap and slugs fall into a scrap conveyor **(06)**.

**Unloading stacked parts**
With its pins, the SmartLift pushes parts out of the skeleton. The delicately structured suction cups of the SortMaster Speed **(07)** take in finished cut parts, sort them and stack them on the parts tray. Suction plates and pins prevent parts tilting.

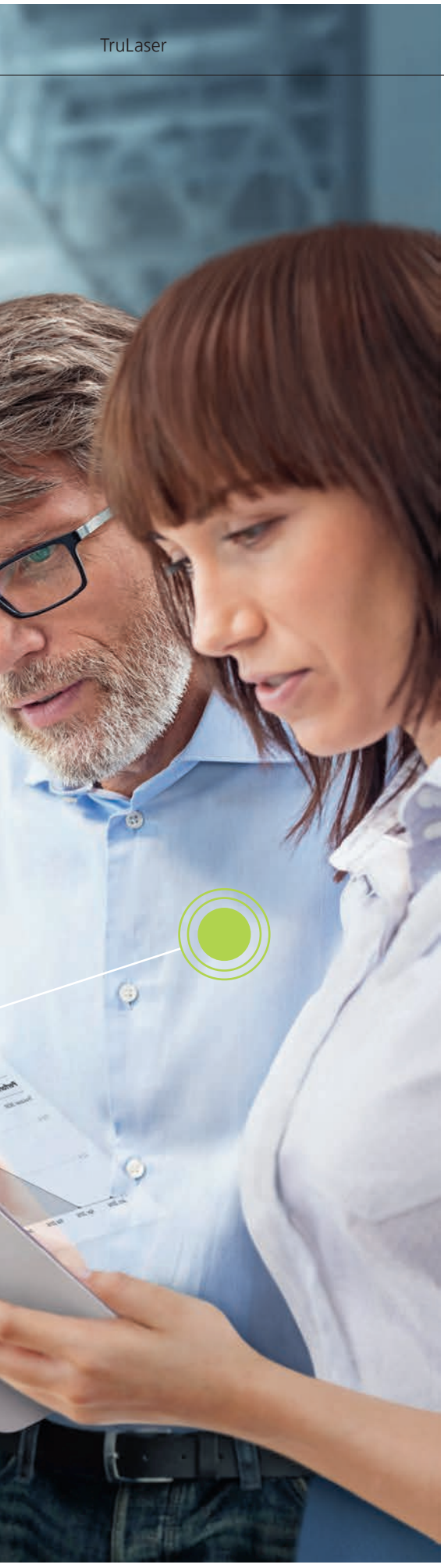
**Unloading good parts and skeletons**
The sorted and stacked parts **(08)** are unloaded from the machine while production is in progress. The clamping unit unloads the skeletons onto the scrap conveyor **(09)**. This can be emptied conveniently while the machine is in operation using a forklift truck.

# TruConnect.
# Your Smart Factory


**80%**

Indirect processes make up 80% of your production time – this represents the greatest potential for savings.

Discover the potential networked production could unlock for you with these two example scenarios: www.trumpf.com/s/smart-factory



Networking brings considerable freedom: You see more, know more, and are able to use your production facility to its full potential. TruConnect - TRUMPF's synonym for Industry 4.0- lets you design your own Smart Factory step by step. The pragmatic solutions from TRUMPF will support you on your networked production journey, helping you make your entire process more transparent, more flexible and, first and foremost, more cost-effective.

## For companies of all sizes: from simple production solutions to an entirely connected facility

- **Getting started** with machines that are fundamentally equipped for networks.
- **Gradually changing** with automated machines or autonomous processing cells embedded in a production solution.
- **Networking everything** with a continuous production solution going from the incoming order to dispatch.

## Smart functions and Industry 4.0

With the MobileControl app you can operate and monitor your machine easily and flexibly: It transfers the standard control panel interface to the touchscreen of your tablet. Thanks to the Central Link interface, your TruLaser machine is ready for Industry 4.0.

Parts marked with Dot Matrix Code simplify your processes.

With Track&Trace, you can monitor up to 50 objects in real-time to know the exact location of everything needed to ship your order to the customer.

**You can find more information** about networked production here:
www.trumpf.com/s/smart-factory

# TruServices. Your Partner in Performance

To secure your future success, capitalize on services that will move you forward, not just short-term but in the long run too: Whether you want to create the best conditions for successful manufacturing, make the most of your TRUMPF laser systems, or have the flexibility to adapt to changing requirements – together we will find opportunities to maximize your value creation long-term. We will provide you with all-around support as a reliable partner with solutions and service packages for your needs – enabling you to manufacture economically and at a consistently high level.

**Comprehensive training program**
**EMPOWER:** When you would like to create optimal conditions for production success: We will help you with that. Take advantage of our comprehensive training program, to increase your knowledge and ensure competitive advantages. In the laser cutting technology course, you learn, for example, how to achieve the best cutting quality possible and how to determine the piercing parameters for special materials.

**The Highspeed Eco cutting system**
**IMPROVE:** If you want to gradually focus your manufacturing on maximum value creation: We will work together to reach your goal. With Highspeed Eco, for instance, you can double your throughput for laser cutting – the surface-mounted nozzle also reduces cutting gas consumption by up to 70%.


| | | |
|---|---|---|
| Financing | Training | Pre-owned machines |
| Technical Service | Tools | Genuine parts |
| Design and programming software | Process optimization | Monitoring & analysis |
| Product enhancements | Value packages | Service agreements |

**You can learn more** about our complete and comprehensive package of useful services here:
www.trumpf.com/s/services

# Perfect interaction for your success

From the machine to the optical system through to the technology data: Intelligent machine functions are based on the interaction between different components. This is why we develop and manufacture them ourselves. The result? Consistent solutions down to the details – the ideal basis for your success.

## The result

**You receive a coordinated production system that is always available.**


### TruServices

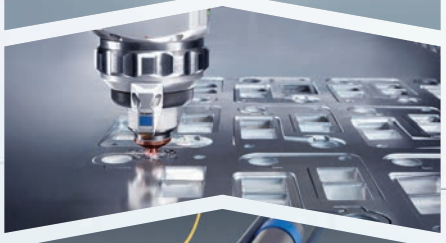
With comprehensive services and a global service network, we are always there for you.


### Software

You optimize your production processes with software solutions from TRUMPF. The TruTops Boost programming software is perfectly adapted to your TruLaser machine.

### Automation

TRUMPF offers the most comprehensive range of modular automation components available for your TruLaser machine.



### Process expertise

Every machine includes up-to-date technology data for laser cutting checked by TRUMPF – this enables you to get started easily.

### Optical system

We develop lasers, fiber optic laser cables, and cutting heads for each specific set of requirements and for every series. The benefit to you: you can make the best possible use of the power of your tool.

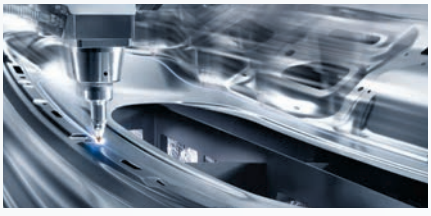
### Machine

All TruLaser machines are developed and produced at TRUMPF – they provide you with a robust solution for your industrial operations.

# Commitment is what drives us

Whether manufacturing and production technology, laser technology or material processing: We develop highly innovative products and services for you that are the industry standard and completely reliable. In order to offer you decisive competitive advantages, we give it our all: Expertise, experience and all of our commitment.

**Visit our YouTube channel:**
www.youtube.com/TRUMPFtube

**Lasers for manufacturing technology**
Whether macro, micro or nano: We have the right laser and the right technology for any industrial application, allowing you to manufacture in an innovative yet cost-efficient manner. In addition to the technology, we will also support you with system solutions, knowledge of applications, and advice.

**Power-supply systems for high-tech processes**
From semiconductor production to manufacturing solar cells: Our high- and medium-frequency generators provide electricity for induction heating, plasma and laser excitation a defined form based on frequency and demand – highly reliable and for repeat accuracy.

**Machine tools for flexible sheet metal and pipe work**
Laser cutting, punching, bending, laser welding: For all processes in flexible sheet production, we offer you custom-fit machines and automation solutions, including consultation, software, and services – enabling you to produce high quality parts reliably.

TruConnect
Your Smart Factory

**Industry 4.0**
The TruConnect range of solutions connects man and machine through information. It covers all steps of the production process – from quotation to shipping your parts.

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

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