

TruLaser:

Cost-effective
cutting through
thick and thin.



In the best hands.

Quality thrives in the right environment.

TRUMPF machines are renowned for their reliability and superb quality. That's because our high quality standards are deeply embedded in our corporate culture and are rigorously applied on a worldwide basis. Thanks to our SYNCHRO production system, we are continuously optimizing our processes, products and services. TRUMPF produces all of its machines on synchronized, standardized flow lines – because optimum quality can only be achieved through reliable processes.




Setting standards.

TRUMPF consistently invests in research and development at a level well above the industry average. Our innovative products and functions constantly set new standards in the field of laser processing. One example of this is BrightLine fiber – the quality breakthrough in solid-state laser cutting.

Sustainable thinking.

We aim to run a cost-effective and responsible business which makes efficient use of resources. For example, the tiny nozzle diameters of our lasers keep gas consumption to a minimum. With the TruFlow, we offer you the world's most efficient CO₂ laser. The universal cooling interface provides efficient machine cooling.

 You can find out more about efficiency+ at www.trumpf.com/efficiencyplus

Making technology simple.

We are driven by our desire to make high-tech laser cutting available to everyone. That's why we focus on developing machines that are user-friendly and easy to operate. Installation, maintenance and programming can be performed without much effort. Many innovations make your everyday work easier: as an alternative to the control panel, the MobileControl app gives you the possibility of monitoring and controlling your machine.

Best choice based on experience.

Our expertise in lasers is based on four decades of experience and the installation of more than 60,000 lasers worldwide. For each laser cutting machine, we carefully select the most suitable option among our eight different types of lasers. As the technology leader, we provide you with neutral, results-oriented advice to help you find the optimum and most cost-effective solution for your particular field of application.

Abundant
choice.



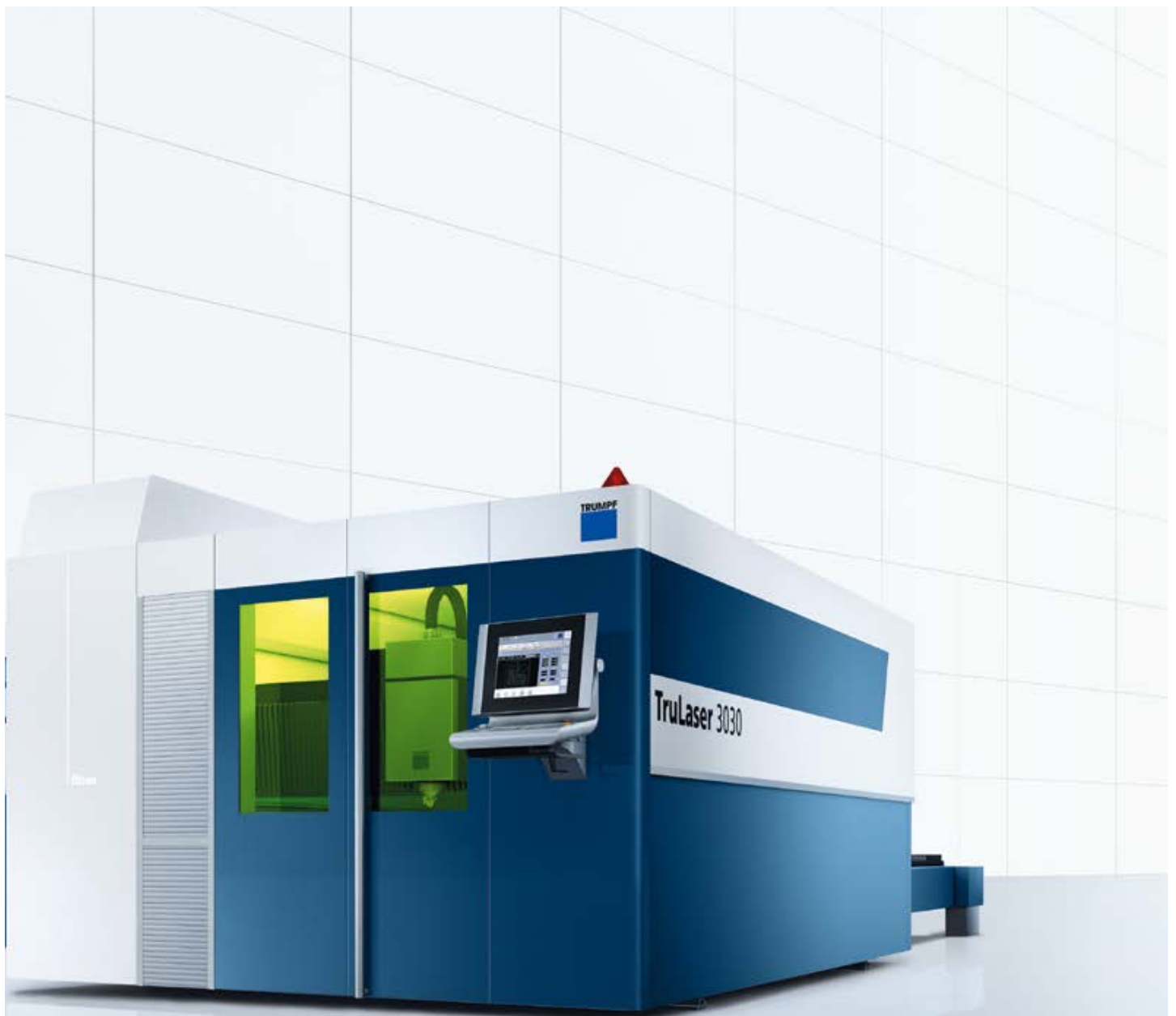


TruLaser Series 3000

Flexible standard machines.

These versatile laser cutting machines provide outstanding flexibility and reliability. The TruLaser Series 3000 is based on a remarkably simple operating and maintenance concept and offers numerous options to enhance its versatility. The use of a single cutting head for all sheet thicknesses eliminates the need to change cutting heads when you switch to a different type of sheet. And the adjustable control panel features convenient and intuitive touch operation to guide you through the program functions.





Benefits at a glance.

- 1 First-class processing flexibility.
- 2 High cutting speeds and minimal downtime.
- 3 Low and easy maintenance.
- 4 Simple to operate.
- 5 Various automation options.

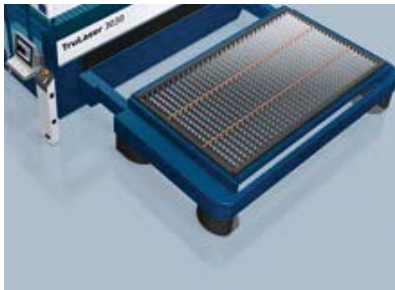
TruLaser Series 3000

Easy to operate and endlessly versatile.

These machines are designed to be easy to operate and maintain. The components are clearly marked and easily accessible. This makes maintenance even easier, so you can get the machine running again even faster. The machines also offer the ability to incorporate many additional functions, helping you to respond with flexibility to changing needs and minimize unproductive time.



The RotoLas add-on enables you to cut tubes and pipes on your 2D laser cutting system.



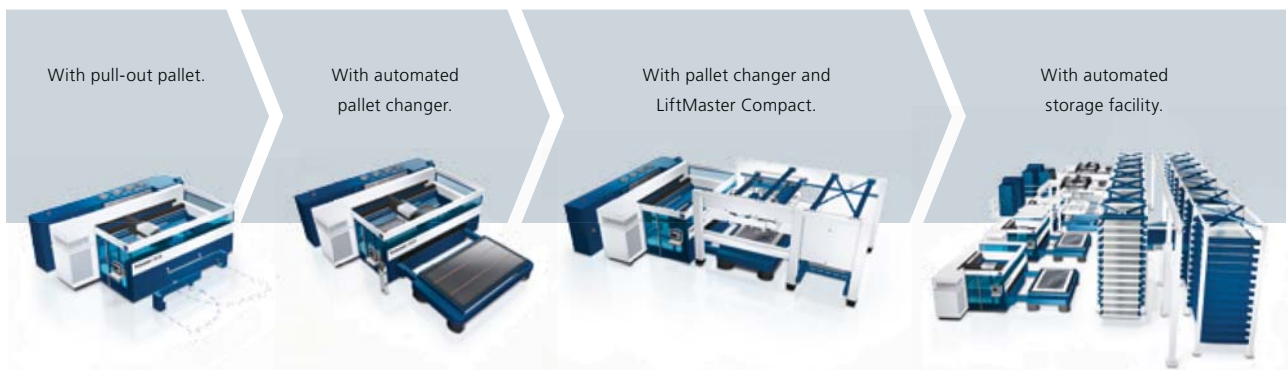
The side positioning of the pallet changer cuts the footprint by about 20 percent.



The lens and nozzle technology package greatly simplifies lens and nozzle operation.

TruLaser 3030 Lean Edition: Grows with your business.

Small, then not so small: This machine is a size-reduced version of the TruLaser 3030 which you can expand to meet increasing production needs. It features an ergonomic pull-out pallet with pallet guides that can be folded in to keep them out of the way – an excellent alternative to the pallet changer.



Machine data					
	TruLaser 3030	TruLaser 3040	TruLaser 3060	TruLaser 3030 Lean Edition	TruLaser 3030 fiber
Working range					
X axis	3000 mm	4000 mm	6000 mm	3000 mm	3000 mm
Y axis	1500 mm	2000 mm	2000 mm	1500 mm	1500 mm
Z axis	115 mm	115 mm	115 mm	115 mm	115 mm
Workpiece					
Max. weight	900 kg	1700 kg	1900 kg	900 kg	900 kg
Max. speed					
Simultaneous	140 m/min	140 m/min	85 m/min	140 m/min	140 m/min
TRUMPF CNC control	Siemens Sinumerik 840D SL	Siemens Sinumerik 840D SL	Siemens Sinumerik 840D	Siemens Sinumerik 840D SL	Siemens Sinumerik 840D SL
Accuracy^[1]					
Position deviation Pa	0.05 mm	0.05 mm	0.05 mm	0.05 mm	0.05 mm
Average position range Ps	0.03 mm	0.03 mm	0.03 mm	0.03 mm	0.03 mm
Dimensions and weight^[2]					
Length	9300/6500 ^[3] mm	12000 mm	16100 mm	6500 mm	9300 mm
Width	4600/7600 ^[3] mm	5300 mm	5200 mm	5600 ^[4] /7100 mm	5100 mm
Height	2200/2200 ^[3] mm	2200 mm	2000 mm	2200 mm	2400 mm
Weight	12000 kg	14000 kg	21500 kg	12000 kg	12000 kg
Available lasers	TruFlow 3200/4000 5000/6000	TruFlow 3200/4000 5000/6000	TruFlow 3200/4000	TruFlow 3200/4000	TruDisk 3001

^[1] The attainable accuracy depends on various factors including workpiece type and pretreatment, sheet size, and the position in the working area.

The accuracy specification refers to VDI/DGQ 3441 for the entire working length and is an approval criterion for delivery status.

^[2] Approximate values. The exact figures can be obtained from the applicable installation plan.

^[3] Applicable when the pallet changer is in the transverse position.

^[4] Width during processing with pallet guides-folded in.

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

Laser data					
	TruFlow 3200	TruFlow 4000	TruFlow 5000	TruFlow 6000	TruDisk 3001
Max. power	3200 W	4000 W	5000 W	6000 W	3000 W
Wavelength	10.6 µm	10.6 µm	10.6 µm	10.6 µm	1.03 µm
Max. sheet thickness					
Mild steel	20 mm	20 mm	25 mm	25 mm	20 mm
Stainless steel	12 mm	15 mm	20 mm	25 mm	15 mm
Aluminum	8 mm	10 mm	12 mm	15 mm	15 mm
Copper	–	–	–	–	6 mm
Brass	–	–	–	–	6 mm
Power consumption of the entire system^[5]	9–53 kW	11–65 kW	15–79 kW	20–89 kW	6–23 kW

^[5] Including suction, control, HF generator and cooling system, depending on the machining program.

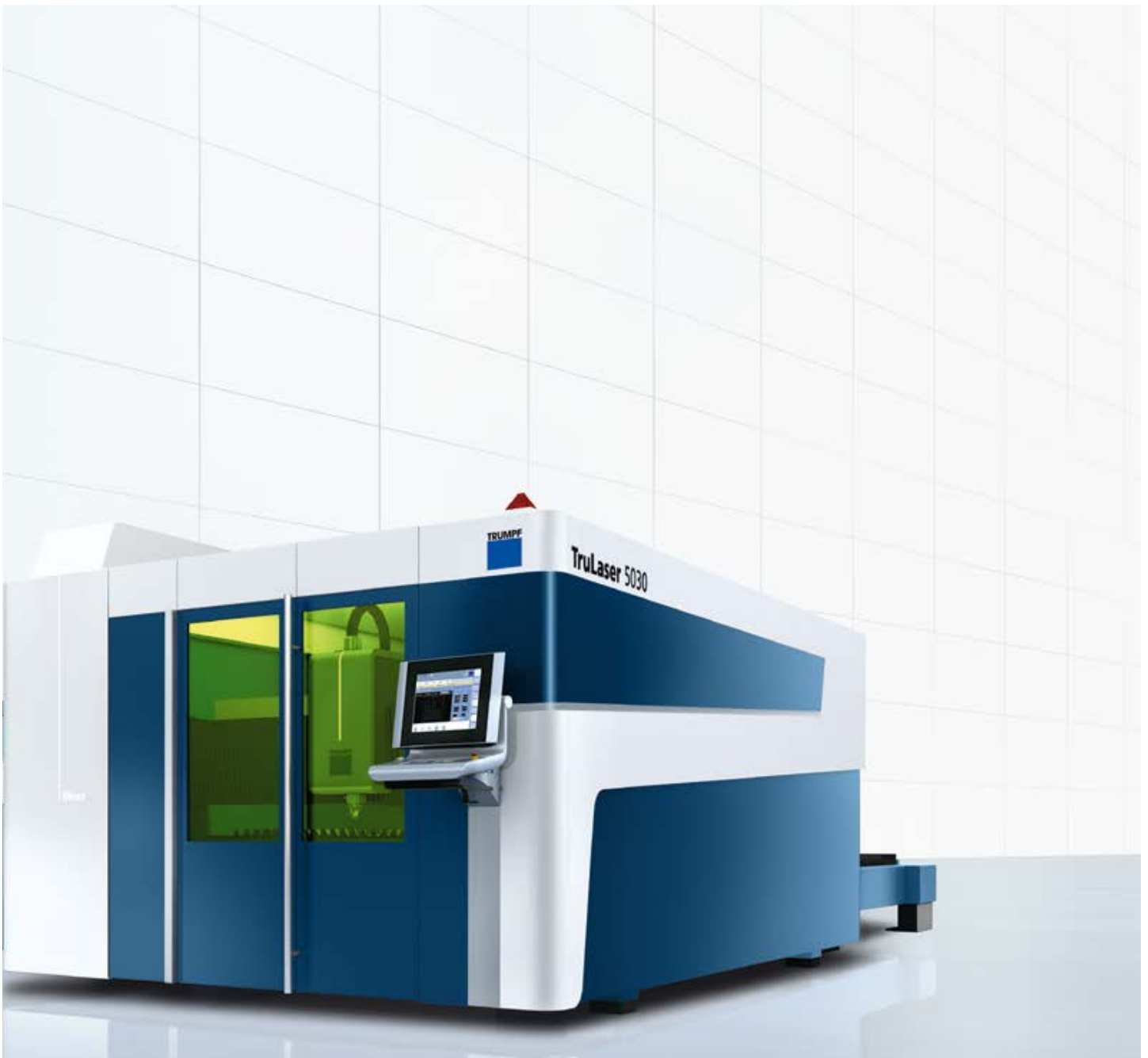
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TruLaser Series 5000

Productive machines.

These powerhouses set high standards of productivity and cost efficiency. This is made possible by dynamic drives, high axis speeds and a high degree of automation. BrightLine and BrightLine fiber guarantee the highest part quality when cutting thick sheets in the CO₂ and solid-state laser technology fields. Thanks to its innovative cooling concept, the CO₂ laser is the best of its class when it comes to efficiency.





Benefits at a glance.

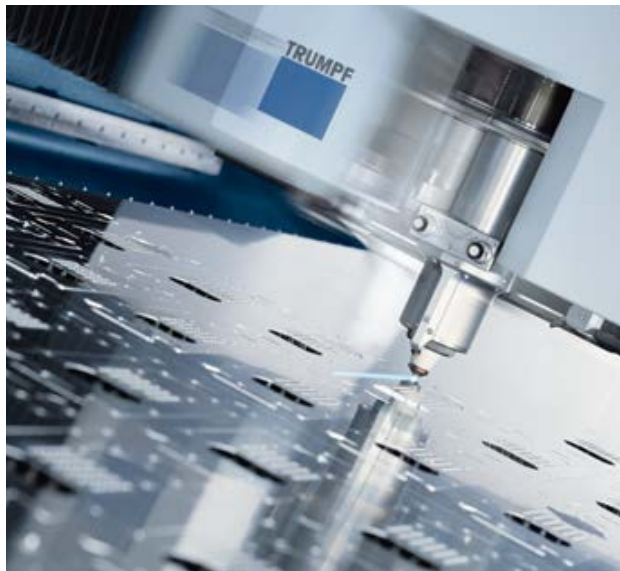
- 1 Maximum productivity for all kind of parts.
- 2 Highest part quality in all sheet thicknesses.
- 3 Maximum process reliability in fully automatic operation.
- 4 Highest energy efficiency.
- 5 High axis speed and positioning dynamics.

TruLaser Series 5000

Real powerhouses.

These highly productive machines effortlessly process both thick and thin sheets. With the TruDisk laser and our highly dynamic drives, you can achieve high feed rates of up to more than 50 m/min in stainless steel, 1 mm thick. With a laser power of up to 8,000 W, the TruFlow can even cut through stainless steel with a thickness of 50 mm. The machines are designed for maximum utility rates and achieve high axis speeds of up to 300 m/min.

Besides productivity, the TruLaser Series 5000 sets standards in the areas of quality and efficiency, too.



High productivity for optimized costs per part.

Highest part quality.

For the first time ever, excellent cutting results can be guaranteed when cutting thick stainless steel with a solid-state laser machine, and this is thanks to the BrightLine fiber option.

Unbeatable efficiency.

The TruFlow owes the best energy balance in the world to an innovative high temperature cooling system. The power consumption can thus be reduced by 30 percent.



BrightLine fiber guarantees the highest part quality when cutting stainless steel, even up to 25 mm thick.

Machine data

	TruLaser 5030	TruLaser 5040	TruLaser 5060	TruLaser 5030 fiber	TruLaser 5040 fiber
Working range					
X axis	3000 mm	4000 mm	6000 mm	3000 mm	4000 mm
Y axis	1500 mm	2000 mm	2000 mm	1500 mm	2000 mm
Z axis	115 mm	115 mm	115 mm	115 mm	115 mm
Workpiece					
Max. weight	1800 kg ^[3]	3200 kg ^[3]	4800 kg ^[3]	900 kg	1250 kg
Max. speed					
Simultaneous	300 m/min	300 m/min	300 m/min	265 m/min	245 m/min
TRUMPF CNC control	Siemens Sinumerik 840D SL	Siemens Sinumerik 840D SL	Siemens Sinumerik 840D	Siemens Sinumerik 840D SL	Siemens Sinumerik 840D SL
Accuracy^[1]					
Position deviation Pa	0.05 mm	0.05 mm	0.05 mm	0.05 mm	0.05 mm
Average position range Ps	0.03 mm	0.03 mm	0.03 mm	0.03 mm	0.03 mm
Dimensions and weight^[2]					
Length	11250 mm	13000 mm	16950 mm	8300 mm	12000 mm
Width	4600 mm	5400 mm	5550 mm	4800 mm	5300 mm
Height	2400 mm	2400 mm	2550 mm	2400 mm	2200 mm
Weight	12000 kg	14000 kg	16000 kg	12000 kg	13000 kg
Available lasers	TruFlow 6000/8000	TruFlow 6000/8000	TruFlow 5000/6000/8000	TruDisk 3001/5001	TruDisk 3001/5001

^[1] The attainable accuracy depends on various factors including workpiece type and pretreatment, sheet size, and the position in the working area.

The accuracy specification refers to VDI/DGQ 3441 for the entire working length and is an approval criterion for delivery status.

^[2] Approximate values. The exact figures can be obtained from the applicable installation plan.

^[3] This information applies to one pallet. The maximum weight for two pallets is not represented here.

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Laser data

	TruFlow 5000	TruFlow 6000	TruFlow 8000	TruDisk 3001	TruDisk 5001
Max. power	5000 W	6000 W	8000 W	3000 W	5000 W
Wavelength	10.6 µm	10.6 µm	10.6 µm	1.03 µm	1.03 µm
Max. sheet thickness					
Mild steel	25 mm	25 mm	25 mm	20 mm	25 mm
Stainless steel	20 mm	25/30 mm ^[5]	50 mm	15 mm	20/25 mm ^[6]
Aluminum	12 mm	15/20 mm ^[5]	25 mm	15 mm	20/25 mm ^[6]
Copper	–	–	–	6 mm	10 mm
Brass	–	–	–	6 mm	10 mm
Power consumption of the entire system^[4]	15–79 kW	15–65 kW	26–95 kW	6–29 kW	7–39 kW

^[4] Including suction, control, HF generator and cooling system, depending on the machining program.

^[5] With mirror cutting head.

^[6] With BrightLine fiber.

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Focused knowledge.

TRUMPF machines are very well equipped for all current demands in sheet metal processing and achieve optimal results. To address specific requirements as well, and simplify operation even further, we are continuously developing innovations, such as regulatory, control functions and sensor systems.

For special requirements, you can expand your production capabilities with our innovative Lines – you will find a selection here. Our assistance systems, such as the smart functions, help you with your daily work. Besides Lines and assistance systems, clever features also optimize your production process.

Productivity, reliability and high quality – these Lines, smart functions and clever features can help you improve your workflow.

↗ Productivity ↻ Process reliability ✓ Quality

▶ AdjustLine



Easy adapting to material quality.

AdjustLine makes the cutting of lower-quality material easier. Furthermore, this function enables the adaptation of the machine dynamics in order to speed up production.

▶ ContourLine



Precision for intricate contours.

ContourLine makes it possible to accurately cut contoured holes with diameters much smaller than the material thickness. A pulsed beam system controls the introduction of heat into the material.

▶ BrightLine



Excellent through thick and thin.

This special cutting system produces the highest quality cuts in thick stainless and mild steel. The smoothness and squareness of the cut edge are far superior to a standard cut. No finishing work is required.

▶ ControlLine



Always the correct distance from the sheet.

Sensors keep the distance between the cutting nozzle and the sheet metal constant – even if the sheet is uneven. ControlLine determines the position of the sheet and adjusts the cutting program, eliminating the need to correct the position manually.

► CoolLine



Cut even thick mild steel intricately.

The selective cooling of the workpiece during the cutting process allows new geometries and significantly increases process reliability in the processing of thick mild steel.

► FocusLine



Adapt focal position automatically.

An adaptive mirror in the beam guidance system makes it possible to automatically adjust the focus position to the material type and thickness. The result: Maximum processing speed and excellent edge quality across the entire range of surfaces and materials – without the need for manual adjustment.

► DetectLine



Precise position recognition and automatic setting of the focal position.

A camera system determines the precise position of sheets being processed, and also enables the precise further processing of parts which have already been cut. In addition, DetectLine automatically adjusts the focus position.

► LensLine



Protection for lens and machine.

LensLine switches off the beam as soon as there are critical impurities within the focusing lens. In doing so the lens is prevented from thermal decomposition, and the beam guidance stays clean. LensLine additionally offers a condition checking function which, thanks to the RFID lens, guarantees perfectly timed cleaning cycles.

► FlyLine



Pierce on the fly and process faster.

The cutting head travels at high speed over the entire sheet line by line. The control system cuts all the contour sections in the respective beam path. This reduces the time spent on traversing and positioning, especially when cutting perforated grids.

► PierceLine



Everything under control when piercing.

PierceLine monitors and controls the piercing process. This reduces stress on the material and machine and shortens pierce time by up to 80%.

Focused knowledge.

▶ Single cutting head strategy



Save time by using a single cutting head that does not require changing. This reduces non-productive time, especially when you are automatically processing a number of different materials.

▶ High-speed cutting



A special cutting head selectively introduces metal vapor plasma to significantly increase cutting speed.

▶ Laser output control



The laser power output is automatically adapted to the cutting speed. This ensures optimum cut quality even on sharp corners and small contours.

	TruLaser Series 1000	TruLaser Series 3000*	TruLaser Series 5000*	TruLaser Series 7000*	TruLaser Series 8000
AdjustLine		■ □	■ □	■	■
BrightLine ⁽¹⁾		■	■	■	■
BrightLine fiber ⁽¹⁾			□		
ContourLine	■ □	■ □	■ □	■ □	■
Controlline	■ □	■ □	■ □	■ □	■
CoolLine ⁽¹⁾		■	■	■	■
DetectLine ⁽¹⁾		■ □	■ □		
Single cutting head strategy	■ □	■ □	■ □	■ □	■
FlyLine		■ □	■ □	■ □	■
FocusLine	■ □	■ □	■ □	■ □	■
High-speed cutting ⁽¹⁾		■	■	■	■
Laser output control	■ □	■ □	■ □	■ □	■
LensLine		■	■	■	■
PierceLine	□	■ □	■ □	■	■
Smart Nozzle Automation ⁽¹⁾			■		

■ CO₂ □ SSL

* Subject to variability. Please contact your TRUMPF sales person for further details.

⁽¹⁾ Optional

BrightLine fiber



Quality breakthrough in solid-state laser cutting.

Thanks to the help of BrightLine fiber, for the first time ever it is possible to achieve excellent quality when cutting thick stainless steel sheets. With the help of this option you can change from thin to thick sheet processing and back on just one machine depending on the job. Amongst others, benefit from the following advantages:

1. Higher quality

For the first time, stainless steel up to 25 mm thick can be processed with excellent edge quality.

2. Higher flexibility

Thanks to BrightLine fiber you not only produce a wide range of different materials but also of sheet thicknesses on only one machine and with excellent results. Besides stainless steel, you are also able to cut aluminum up to 25 mm thick.

3. Higher process stability

BrightLine fiber ensures a high process stability when processing mild steel, regardless of material quality.

4. Minimum contours

You can cut smaller contours than ever with the help of BrightLine fiber.

Smart Nozzle Automation



Process reliability in fully automated operation.

If a cutting result is unsatisfactory, this could be due to a variety of reasons:

Soiled or damaged nozzles and lenses are possible causes, and a beam which is not centered within the nozzle is another. Previously, the operator himself who had to check all of this manually, but now there are automated solutions from

TRUMPF: Three sensors and one automation component increase the process reliability especially in fully automated operation:

- Automatic beam alignment
- Automated nozzle changer
- Nozzle inspection
- LensLine with condition checking

TRUMPF is certified according to ISO 9001:2008
(for additional information see www.trumpf.com/en/company/quality)

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