

## CO<sub>2</sub> Laser Cutting Machine



CO<sub>2</sub> laser technology  
for thin and thick sheet metal

**TRUMATIC**  
**L 2530 Plus**



# Laser Processing Plus

In 1987 TRUMPF introduced the first flat bed laser cutting machine with the TRUMPF Laser TLF. Since then, these machines have revolutionized the field of sheet metal fabrication. Their trademark is the combination of precision machine construction with ultramodern laser technology.



The TRUMATIC L 2530 Plus is a compact machine that is easy to transport and set up. The machine body consists of a one-piece steel welded structure.

The motion unit operates according to the "flying optics" principle, which enables the full realization of the machine's acceleration potential – regardless of workpiece weight.

The use of the new »Sprint Axis Plus« considerably increases the machine's dynamics and reaction time. Processing times – especially for parts that mainly feature small contours – are drastically reduced.

The user-friendliness of the TRUMATIC L 2530 Plus is evident not only in its easy to use

control unit, but also in its entire design.

This design is thoroughly based on ergonomic processes.

This means that the machine is operated from the »long side«. The front of the machine can be opened along its entire length to facilitate loading and unloading.

The key factor in this design is a transverse motion unit, which meets TRUMPF's high standards for precision and dynamics and combines maximum rigidity with low weight.



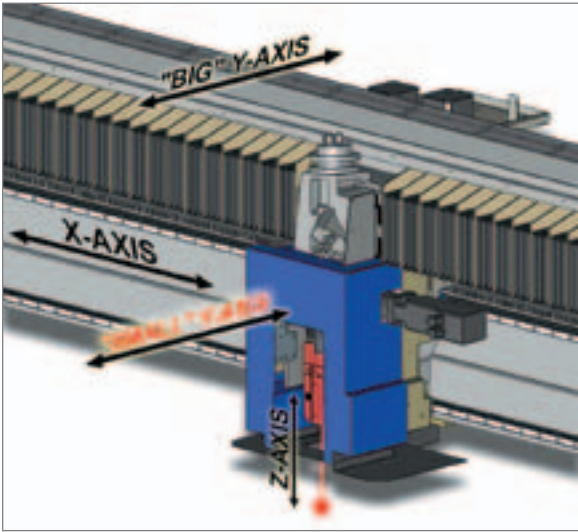
The most important machine features in a nutshell:

- Machine made »from one piece«
- Additional Sprint Axis Plus
- Good accessibility and ergonomics
- Minimal space requirements
- Easy to use
- Working range for medium format
- High safety and environmental standards

**The ready-for-assembly processing of workpieces with high-grade edges and the efficiency of the laser are reasons to make the switch to laser technology. The setup times are minimal, and the control and programming technology ensure that the drawing is implemented smoothly into a finished part.**

# Sprint Axis Plus

## Even quicker to the draw



Sprint Axis Plus  
for even greater productivity

The innovative Sprint Axis Plus offers additional possibilities and higher speeds for processing parts with predominantly small contours. This results in even greater productivity.

The additional Y-axis is integrated in the motion unit. As a result of its low weight, the Sprint Axis promises substantially higher dynamics. The processing time can be reduced accordingly – depending on the parts geometry – by up to 30%.



The laser beam is a universal tool. Its strength lies in its ability to process a large variety of different materials in thin and thick sheet metal.

The parts geometry can be simple or complex. The laser beam processes everything so that it is ready-for-assembly without the need for reworking.

Technology developed specially for TRUMPF machines ensures the best results in laser machining:

- SprintLas: increased processing speed in thin sheet metal
- TwinLine: common cuts
- PMS: (Plasma Monitoring System) monitors process safety while cutting thick stainless steel
- Compressed air cutting (option): enables fast cutting at low gas costs
- Microweld: workpieces – even those made of very thick materials – are simply and quickly retained in the sheet through spot welding
- HI-LAS: oxide and burr-free edges in stainless steel and aluminum alloys thanks to high-pressure cutting
- ContourLas: thick sheet processing to perfection



Fig. top: Various materials in thin and thick sheet metal, below: High speed cutting with SprintLas

## Its operation

### Laser technology made easy

The TRUMATIC L 2530 Plus control panel is located on the right-hand side of the machine. Work and deposit surfaces ensure an orderly environment. All process steps can be monitored at once from this position. TRUMPF's comfortable operator interface has many of the typical features of the familiar Windows OS.

- The machine functions are not the main focus here, but rather the activities that you want to perform.
- You can start processing with just a few steps. An integrated online help function answers all questions as soon as they arise.
- The diagnostic concept displays malfunctions with pictures. Corrective measures are displayed in plain English. And of course, Teleservice is included.

Operating panel in the machine frame



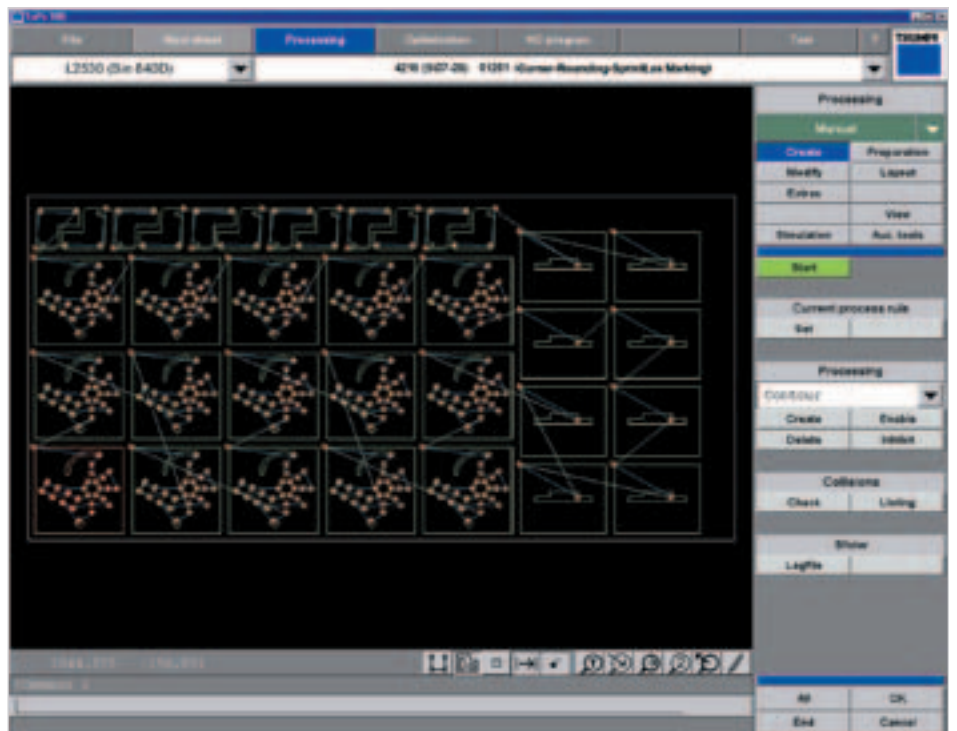
## The programming system

### Tailored precisely to the machine

ToPs 100 is a TRUMPF development. Machine and program system are optimally coordinated with each other.

- Automatic processing: You can import parts drawings from your CAD system or generate them with the ToPs drawing function. Processing takes place automatically.
- ToPs incorporates our technological know-how. All processing parameters and data are stored in technology tables and rules. ToPs »knows« which cutting parameters are best suited for your material and how they can produce the best cutting results.

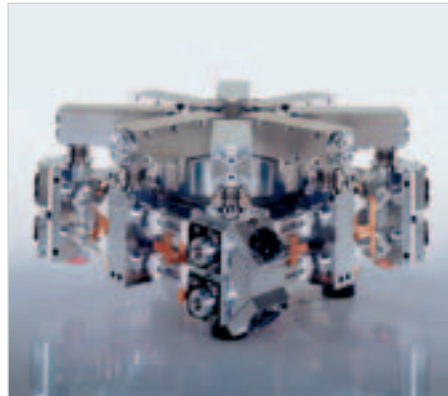
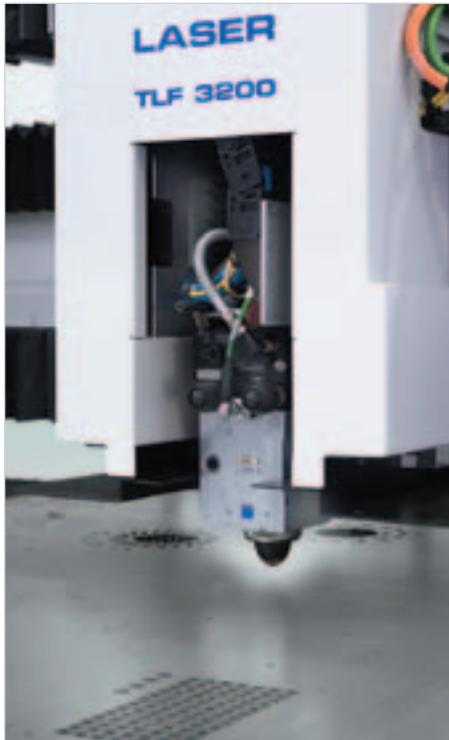
ToPs lite is the shopfloor version of ToPs 100.



Automatic processing with ToPs 100

# Laser Processing

## The Best by Far



Compact and powerful:  
TRUMPF Laser TLF

Cutting with APC height regulation

The cutting head is easy to use. The quick-change system allows the cutting head to be exchanged in a matter of seconds.

The APC (Advanced Process Control) height regulation capacitively regulates the stand-off between cutting nozzle and sheet, thus guaranteeing the best cutting results in uneven sheets as well.

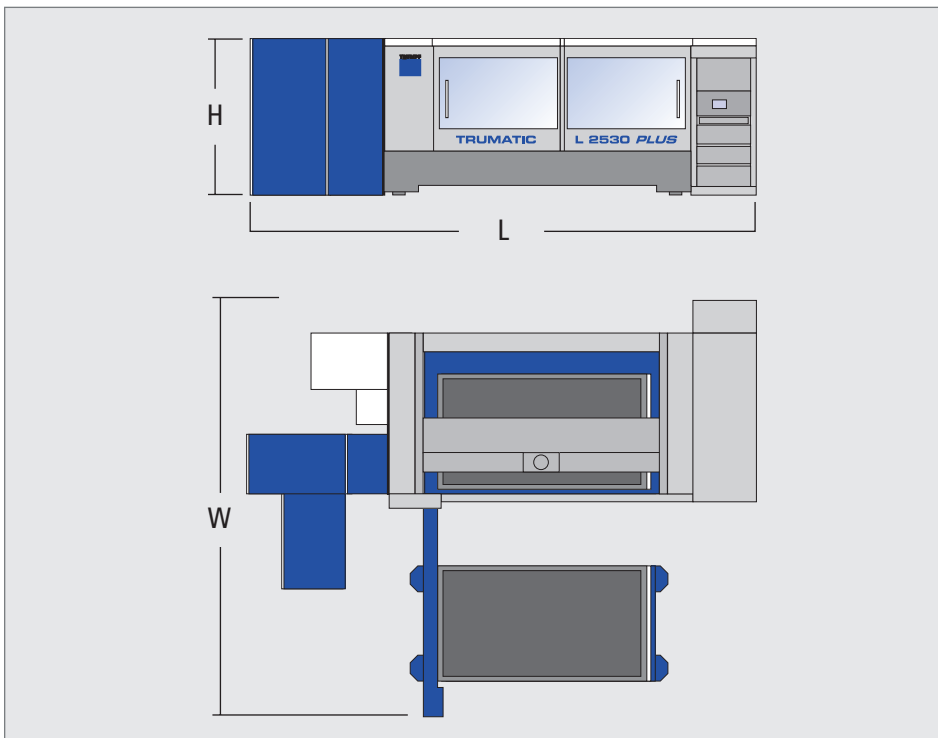
### TRUMPF Laser TLF as desired

The TRUMATIC L 2530 Plus can be equipped with lasers of varying output. Its features include highest beam quality with infinitely variable laser power, combined with low gas consumption thanks to RF technology.

The control mechanism, AutoLas Plus, keeps the focus constant over the entire work area, ensuring automatic adjustment of the focus position to the material type and thickness.

## Option

### Change pallets automatically



On the basic machine, the pallet is removed manually from the work area during loading and unloading, thus providing easy access from all sides.

### Pallet changer

The pallet changer option enables the machine to be loaded and unloaded while production is running. It is placed directly in front of the machine and therefore accessible from three sides.

Compact setup with pallet changer

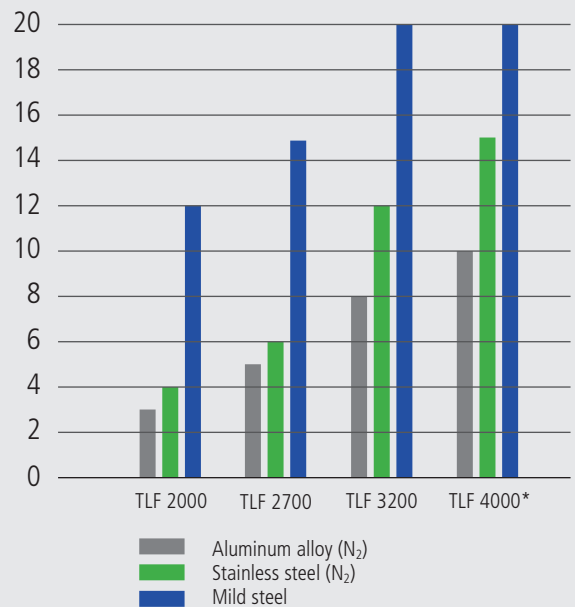
# The Data

## Straightforward & convincing

### Machine **TRUMATIC L 2530 Plus**

Working range	X axis	2500 mm
	Y axis	1250 mm
	Z axis	115 mm
Max. workpiece weight		500 kg
Max. speed	axis parallel	60 m/min
	simultaneous	85 m/min
Accuracy <sup>1</sup>		
Smallest programmable increment		±0.01 mm
Positioning accuracy Pa		±0.1 mm
Repeatability Ps		±0.03 mm
TRUMPF CNC path control		Based on Sinumerik 840 D
Space requirements and weight <sup>2</sup>	Length (L)	7800 mm
	Width (W)	4700 mm
		6100 mm with pallet changer
	Height (H)	2000 mm
	Weight	6500 kg
		7900 kg with pallet changer

Maximum sheet thickness in mm



\*greater productivity than with TLF 3200

### TRUMPF CO<sub>2</sub> Laser

RF excited

	TLF 2000	TLF 2700	TLF 3200	TLF 4000
Guaranteed max. power in cw mode	2000 W	2700 W	3200 W	4000 W
Adjustable power range in 1% increments	100 – 2000 W	140 – 2700 W	160 – 3200 W	200 – 4000 W
Wavelength	10.6 μm	10.6 μm	10.6 μm	10.6 μm
Beam mode	TEM <sub>00</sub>	TEM <sub>00</sub>	TEM <sub>00</sub>	TEM <sub>00</sub>
Gating frequency	100 Hz – 10 kHz	100 Hz – 10 kHz	100 Hz – 10 kHz	100 Hz – 10 kHz
Consumption values	Laser gas			
	CO <sub>2</sub>	1 l/h	1 l/h	1 l/h
	N <sub>2</sub>	6 l/h	6 l/h	6 l/h
	He	13 l/h	13 l/h	13 l/h
Cutting gas <sup>3</sup>	O <sub>2</sub>	500 – 2000 l/h	500 – 2000 l/h	500 – 2000 l/h
Laser cooling	closed system			
Electrical consumption values for the entire unit <sup>4</sup>	22 – 42 kW	24 – 52 kW	27 – 53 kW	33 – 67 kW

<sup>1</sup>According to VDI/DGQ 3441. Measurement length 1 m. The achievable accuracy in the workpiece depends in part on the workpiece, its pretreatment, size, and its position in the work area.

<sup>2</sup>Approx. values. Precise data can be taken from the valid installation plan.

<sup>3</sup>Depending on the particular application.

<sup>4</sup>Including suction, control, RF generator, and chiller.

TRUMPF is certified in accordance with DIN EN ISO 9001 and VDA 6.4



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