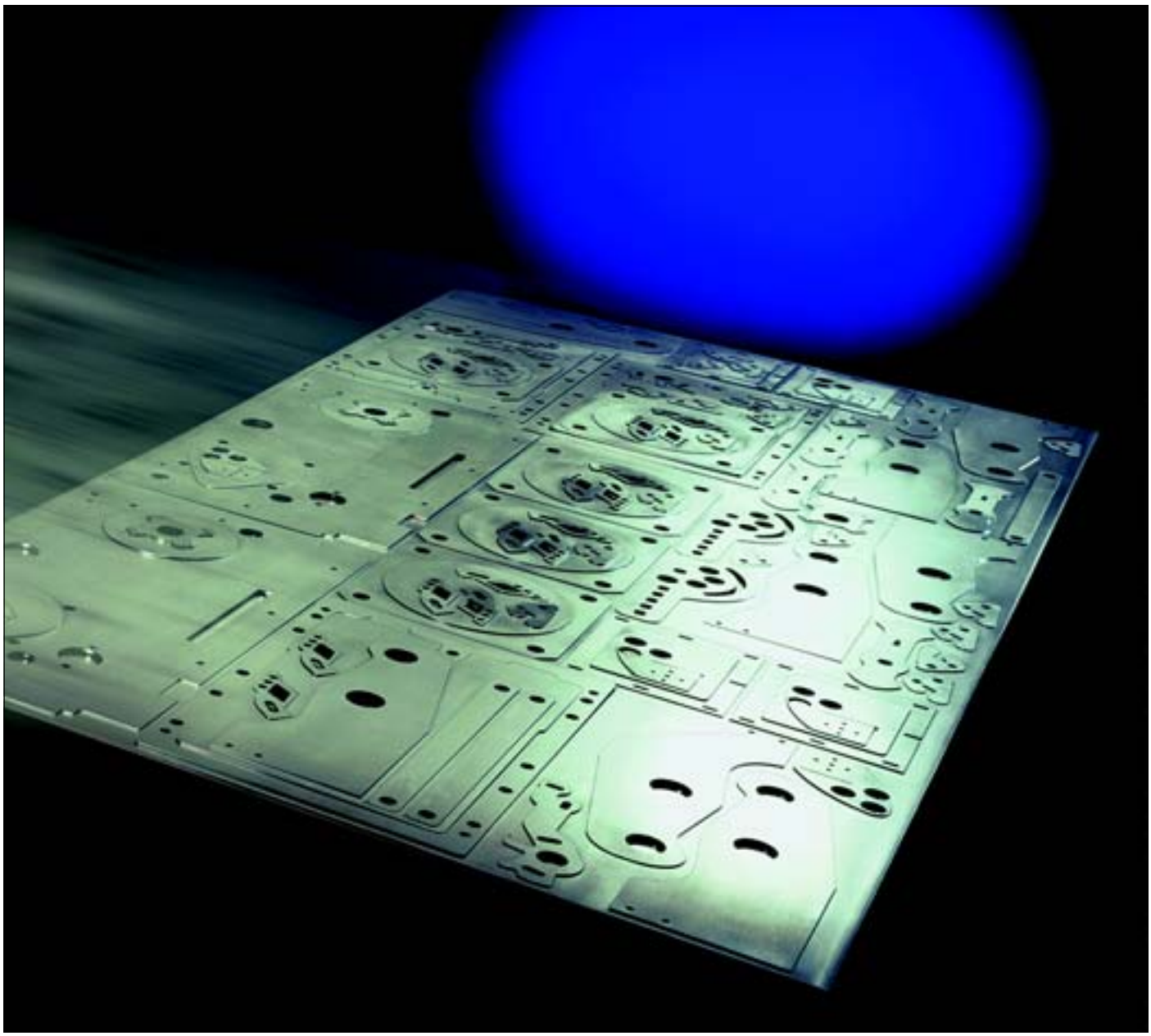
Flexible Sheet Metal Fabrication



Automation of the TRUMATIC L 3030 - L 4030 - L 6030

Computer-Controlled
Sheet Metal Fabricating Cell
for Laser Processing

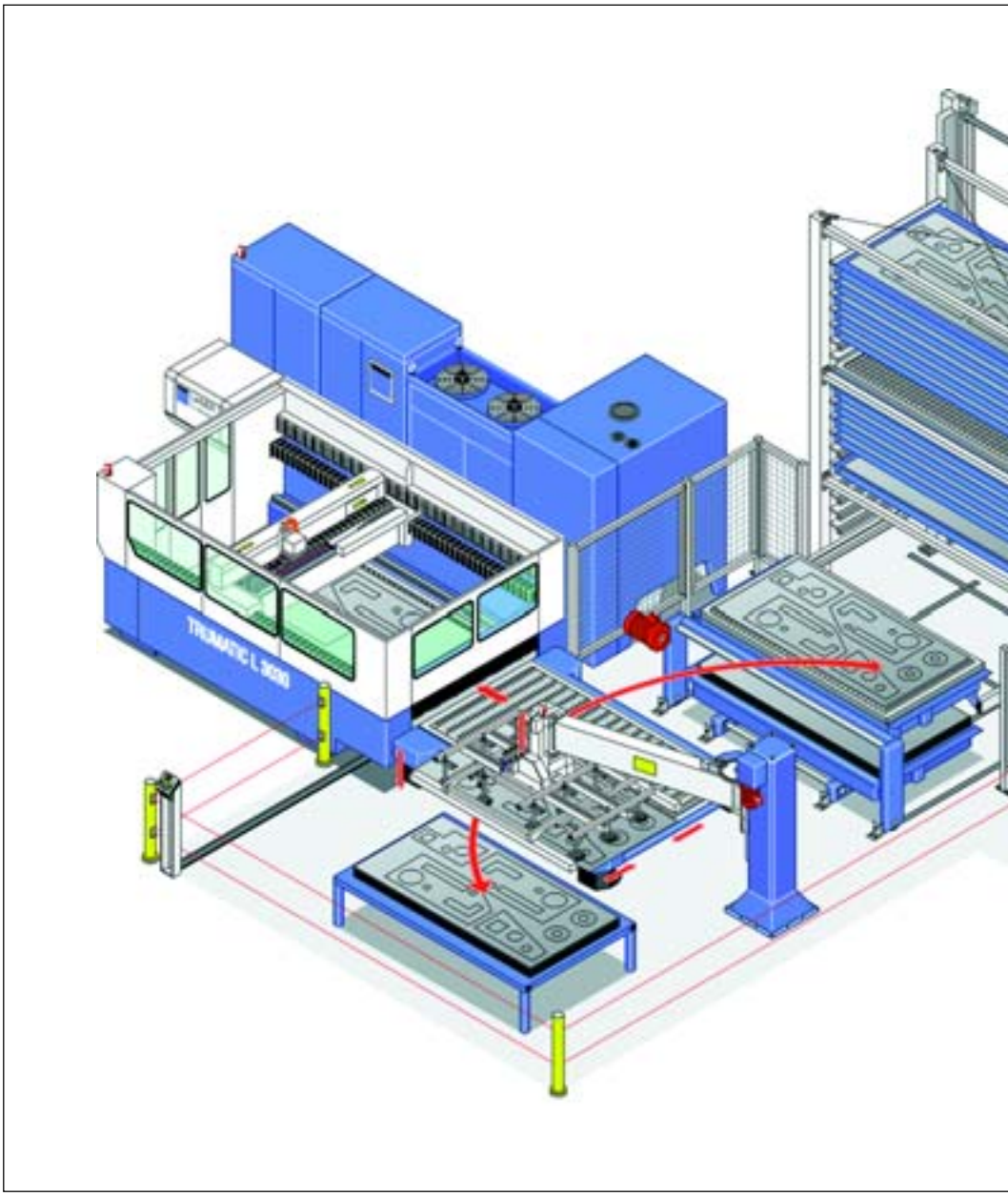
TRUMPF

Automatic Processing without Compromises

Automated laser cutting installations give you room to maneuver. Increasingly shorter innovation cycles combined with ever smaller lot sizes require production methods and strategies which are both flexible and productive. The only way to deal with shorter product life cycles is to act in a flexible, no-compromise manner. Get the flexibility you need.

Our automation of flatbed laser cutting installations derives directly from the many years of experience we've gained from planning and engineering sheet metal fabrication systems.

At the heart of the installation: high-powered laser cutting installations from the TRUMATIC L 3030 - L 4030 - L 6030 series, combined with automation components for loading and unloading.

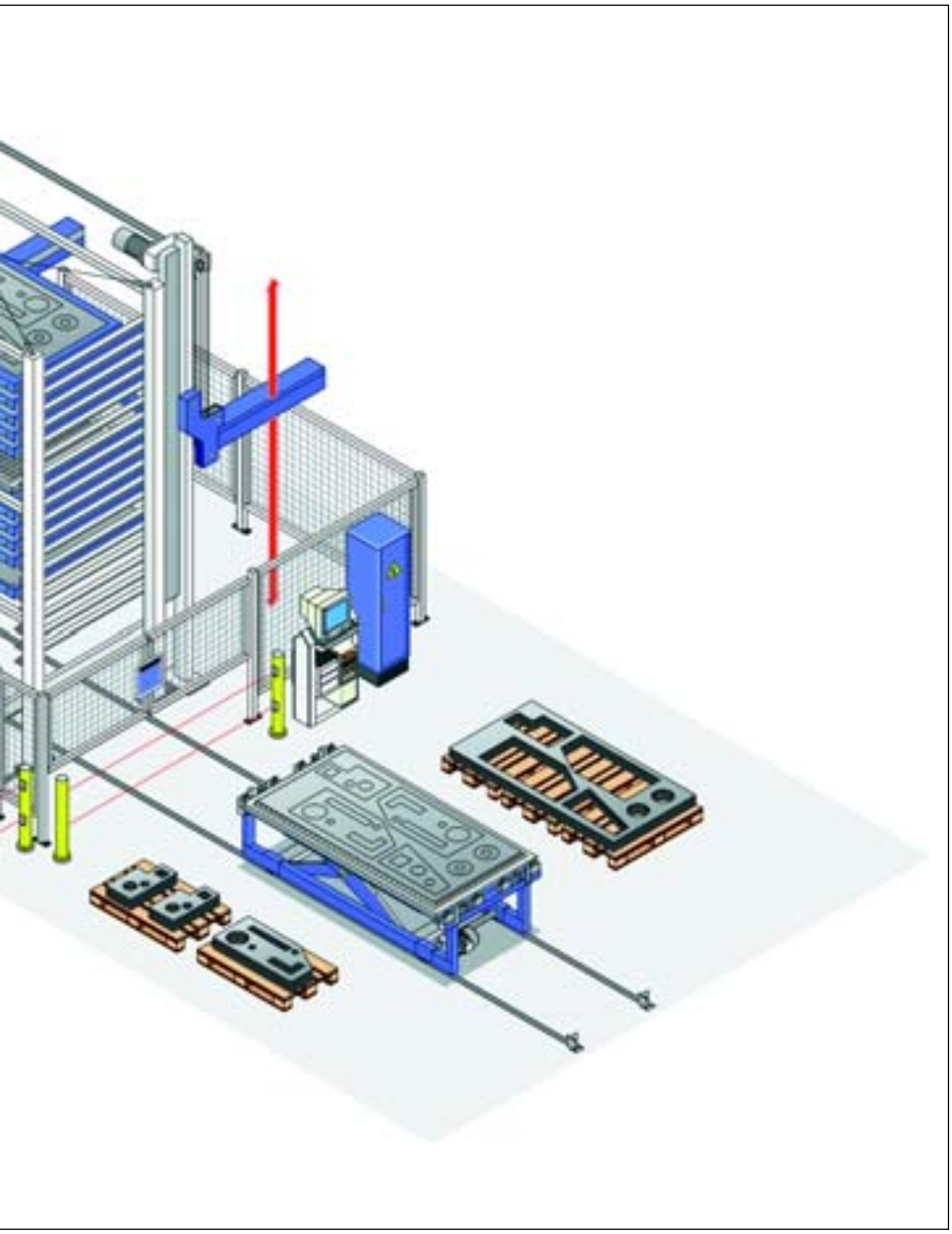


Increasing Production via Flexibility

You can achieve a high level of machine utilization, thanks to flexibility in your processing tasks combined with minimal setup times. The laser beam is a multi-functional tool, and its great strength is that it can process all kinds of different materials, both thick and thin, without a problem. Parts geometry can be simple or complex (the laser beam completes everything ready for assembly).

Shorter Throughput Times

Fast machines and a properly coordinated material flow ensure short throughput times. Automation technology means that an orderly material flow is guaranteed both before as well as during the production process. The integrated job table controls and monitors the NC program sequences. Unmanned operation is no longer just a vision of the future.



Automation technology ensures smooth material flow, removing all obstacles to round-the-clock production.

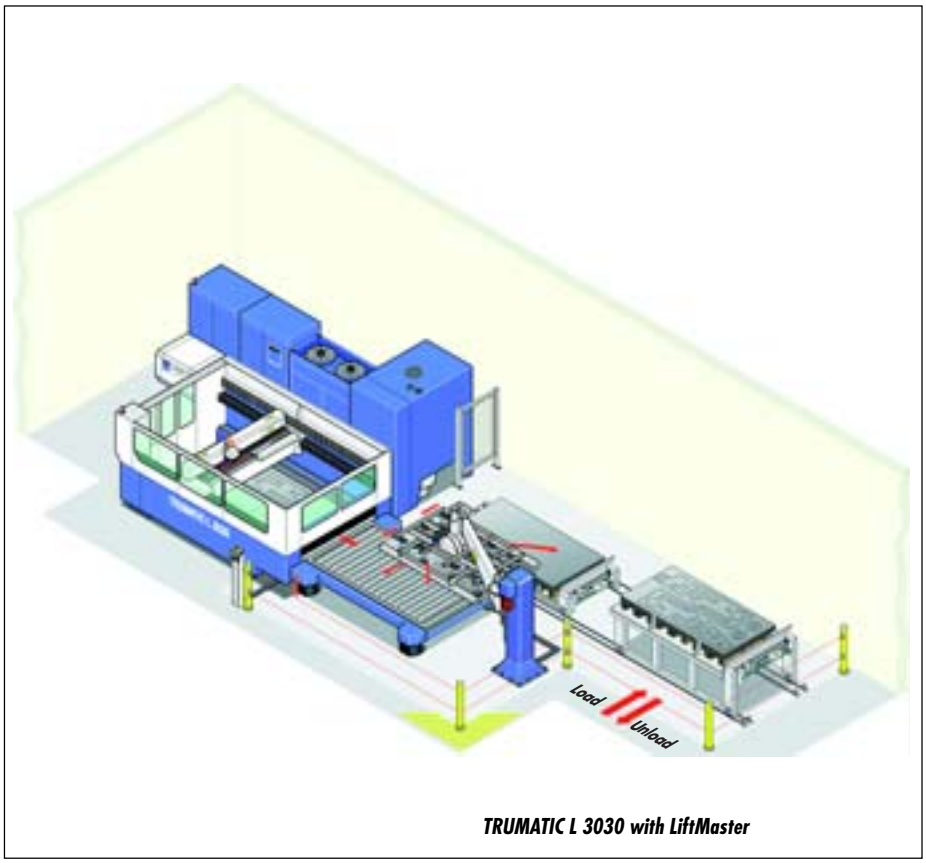
Optimal Use of Resources

Your resources are valuable. Tried-and-tested machine and laser technology needs uncomplicated programming to go with it. This is where ToPs, the programming system from TRUMPF, comes in. It »knows« precisely which cutting parameters are suited to your material as well as how to provide you with the very best cutting results. Its strengths include fully automatic machining definitions and job-specific nesting of sheets (as well as a function whereby it creates sheets with largely similar layouts). ToPs contains our technological know-how, making the laser tool exceptionally simple to master.

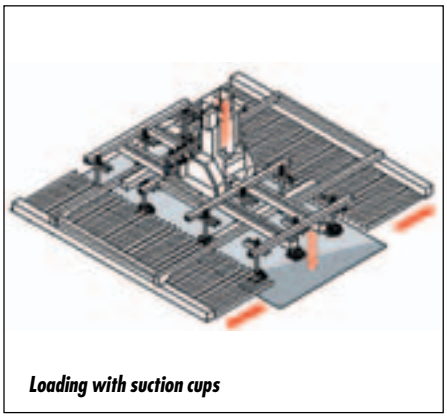
The Modular Stages: Automation Made-to-Measure

Automation technology for flatbed laser machines is designed as a series of modules. All the basic components are TRUMPF developments. As the general contractor we supply you with turnkey solutions plus programming and control technology (all from one and the same source).

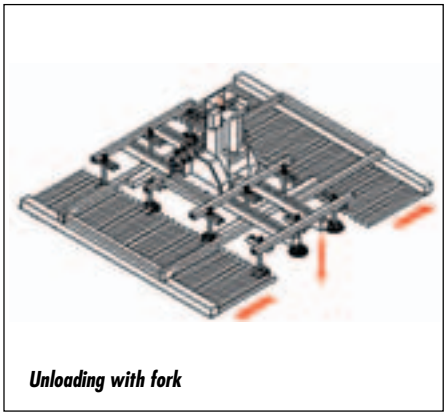
Our project engineers have all the necessary experience plus specialized knowledge based on many years of system installation development. Extensive know-how with regard to sheet metal working, conveyor technology, storage technology and control technology qualify us to plan and engineer the very best solutions to meet your needs. Take advantage of our experience.



TRUMATIC L 3030 with LiftMaster



Loading with suction cups



Unloading with fork

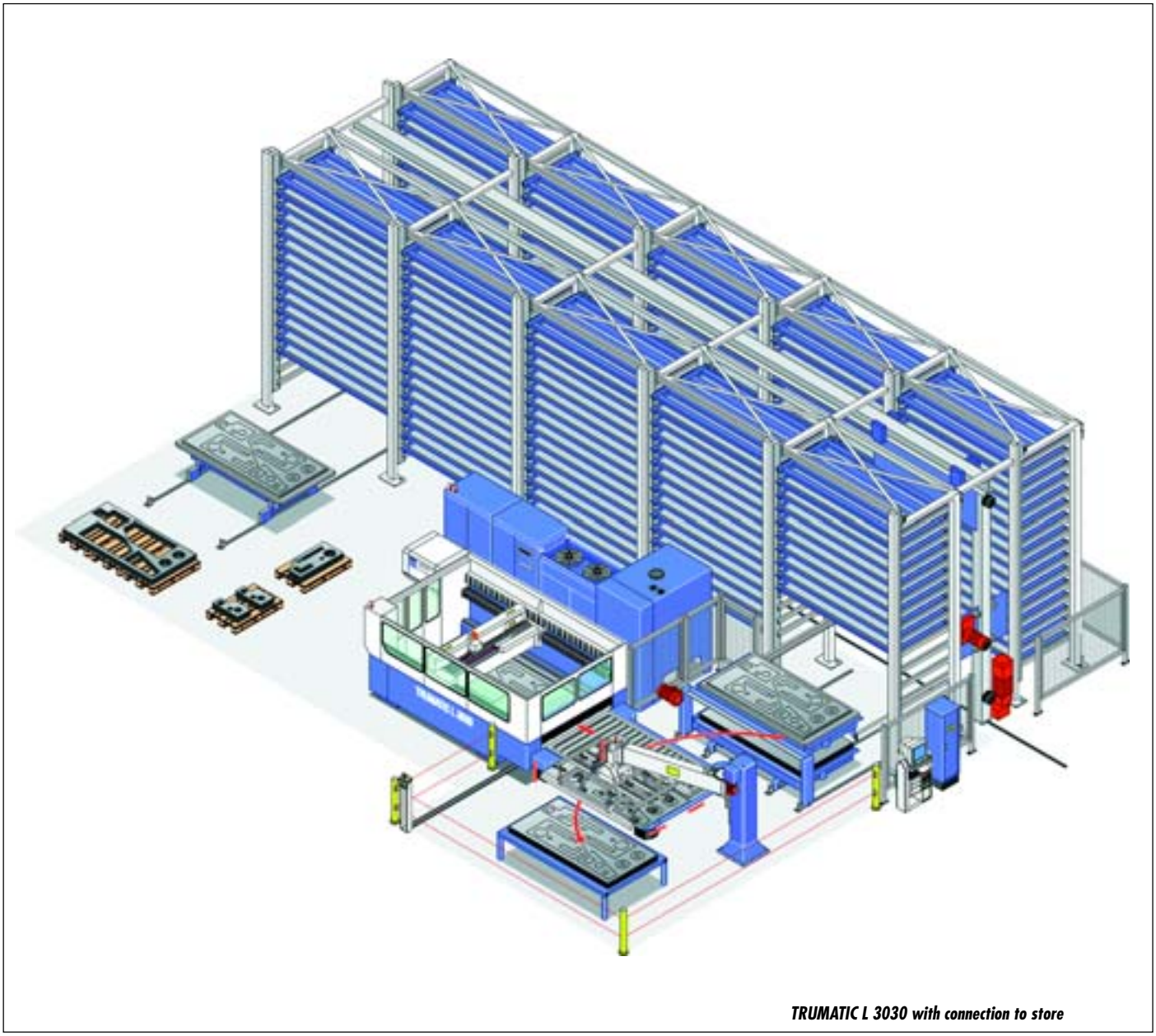
Machines in the TRUMATIC L 3030 - L 4030 - L 6030 series come with an automatic pallet-changer as standard, enabling machine loading and unloading parallel to production.

Loading Device

The first modular stage for all machines is a loading device, which automatically loads the pallet-changer with sheet metal blanks. Secure and swift loading of the machine with heavy metal sheets couldn't be easier.

Simple Automation with LiftMaster®

A good low-end automation solution for the TRUMATIC L 3030 is the LiftMaster, which automates all loading and unloading operations. Suction cups convey the sheets from the stack of blanks to the machine's pallet-changer. An unloading fork transports completed workpieces and residual skeletons from the pallet-changer to the stack of finished parts. The LiftMaster is programmed with ToPs 100, and a job table ensures that orders are processed smoothly and methodically.



TRUMATIC L 3030 with connection to store

System Solution with Connection to Storage System

The high-end solution: a system that can consist of several laser cutting installations and other sheet metal fabricating machines. The central control point is the storage system. The TC-Cell production host computer readies the necessary manufacturing data and materials and also controls system sequences.
Modular design and extension enable solutions to suit the most varied requirements (all the way to a fully automated system).

Technical Data

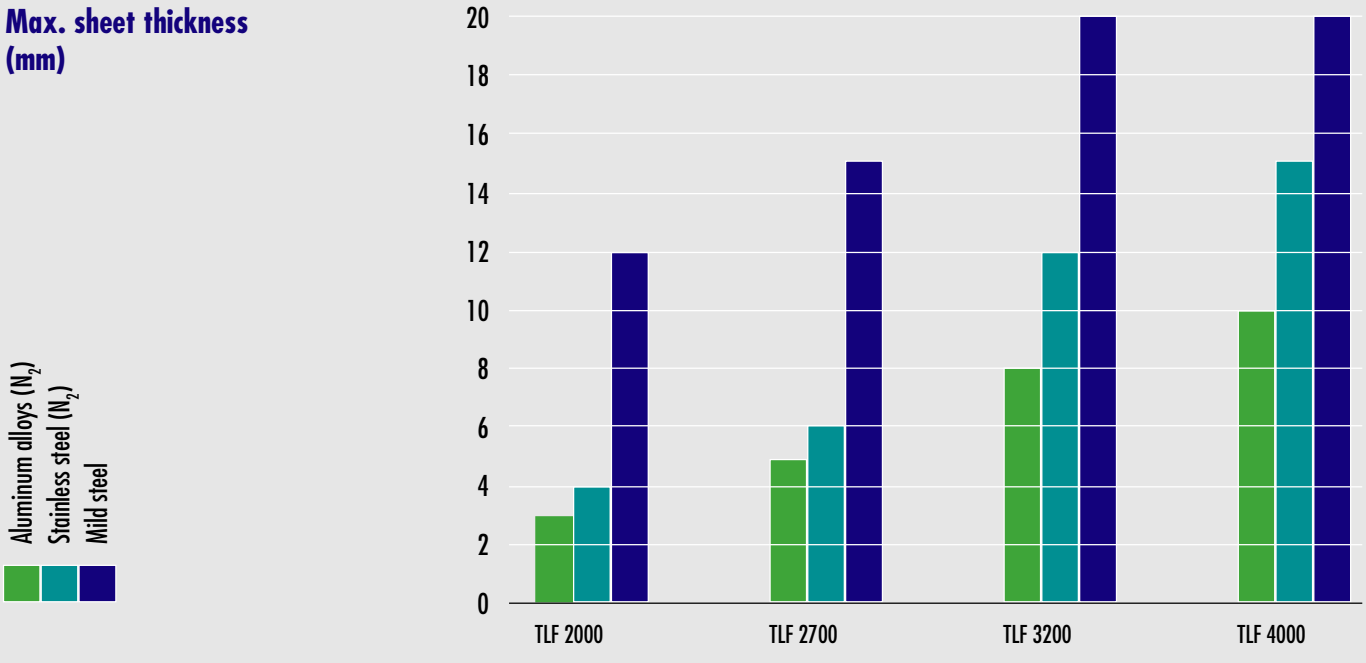
For more detailed information please consult the machine brochure

Machine		TRUMATIC L 3030	TRUMATIC L 4030	TRUMATIC L 6030
Working range	X-axis	3000 mm	4000 mm	6000 mm
	Y-axis	1500 mm	2000 mm	2000 mm
	Z-axis	115 mm	115 mm	115 mm
Max. workpiece weight		710 kg	1250 kg	1900 kg
Max. speeds	parallel to axis	60 m/min	60 m/min	60 m/min
	simultaneously	85 m/min	85 m/min	85 m/min
Accuracy				
Smallest programmable increment		0.01 mm	0.01 mm	0.01 mm
Positioning accuracy Pa		±0.10 mm	±0.10 mm	±0.10 mm
Repeatability Ps		±0.03 mm	±0.03 mm	±0.03 mm

TRUMPF CO_2-Laser - RF-excited		TLF 2000	TLF 2700	TLF 3200	TLF 4000
Guaranteed max. output (Programmable in 1% increments)		2000 W	2700 W	3200 W	4000 W
Wavelength		10.6 µm	10.6 µm	10.6 µm	10.6 µm
Beam mode		TEM 00	TEM 00	TEM 00	TEM 01*
Gating frequency		100 Hz – 10 kHz	100 Hz – 10 kHz	100 Hz – 10 kHz	100 Hz – 10 kHz
Consumption values					
Laser gas	CO_2	1.0 l/h	1.0 l/h	1.0 l/h	1.0 l/h
	N_2	6.0 l/h	6.0 l/h	6.0 l/h	6.0 l/h
	He	13.0 l/h	13.0 l/h	13.0 l/h	13.0 l/h
Cutting gas[1]		500 – 2000 l/h	500 – 2000 l/h	500 – 2000 l/h	500 – 2000 l/h
Laser cooling system		Closed system	Closed system	Closed system	Closed system
Electrical consumption values of entire unit[2]		23 – 45 kW	25 – 54 kW	27 – 56 kW	33 – 67 kW

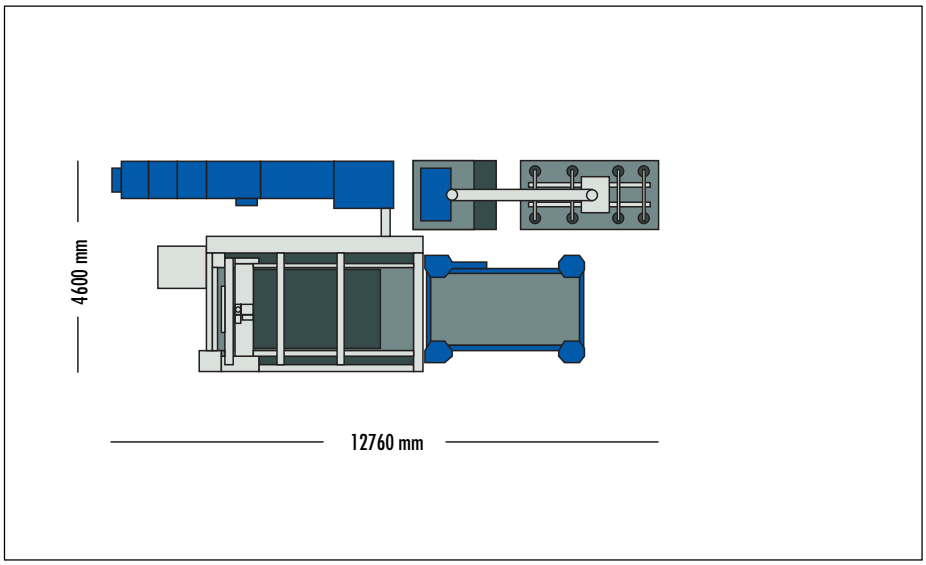
[1] Contingent on respective application.
[2] Includes suction, control, RF generator and cooling unit.

Max. sheet thickness (mm)

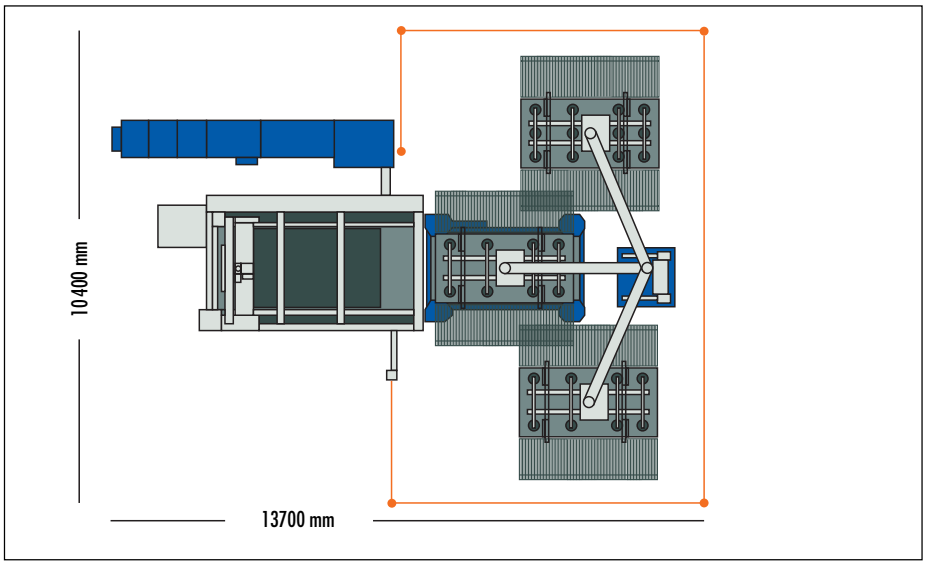


Installation Layouts

TRUMATIC L 3030 with loading device



TRUMATIC L 3030 with LiftMaster



TRUMPF is certified according to DIN ISO 9001

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