

TruLaser Tube

Shape the
future.



Go with growth.

Whether you're already in the business of conventional tube cutting or looking for new segments to enter, an annual growth rate of around 10% makes the market for laser-cut tubes an exceptionally good place to find success.

Tubes and profiles are used in everything from machine and system construction to the furniture industry. The introduction of laser tube cutting has forged the way for a host of new design opportunities in this area, and designers are increasingly taking advantage of laser-cut tubes and profiles. Consequently, demand for these products has increased significantly. Does your company stand to benefit from the competitive edge of laser tube cutting?



The process of laser tube cutting requires fewer steps which saves money.

Laser is the future.
4–5

Cutting with lasers requires less time and lowers part costs.

Flexibility and efficiency.
6–7

Lay the foundation for long-term success with laser tube cutting.

The road to success.
8–9

Real benefits every step of the way.

**Solutions that
move you forward.**
10–11

The right machine for every job.

Our machines.
12–17

We're there for you when you need us, with customized consulting services and a large service network.

Your goals are our business.
18–19

Laser is the future.

Pressure to manufacture products in shorter time periods and at lower costs is growing in conventional tube cutting. With the laser, entire process steps are no longer necessary, and this means immediate savings. You can expand your part spectrum and your range of customers at the same time. The laser's versatility makes it possible to produce small lot sizes quickly and efficiently and offers the flexibility needed to tackle custom jobs. The broadened spectrum of design possibilities offered by laser cutting gives both manufacturers and their clients a clear competitive edge over conventional methods.



"Laser tube cutting offers new design options with which tube processors generate a lot of excitement in their customers. In addition, innovative designs make it possible to save a great deal of money."

Norbert Beier, Head of Sales: Laser Tube Cutting



Why laser?

- Take advantage of true flexibility
- Efficient production

Flexibility and efficiency.

Contour freedom

The laser enables complete freedom in processing contours. The laser beam makes it easy to cut even the most complex contours and its intuitive controls enable you produce small, high-quality lots quickly.

Economize on tools

The laser is a single tool which enables you to process a variety of materials, wall thicknesses and profile geometries without ever having to touch the material. As opposed to working with other technologies, tool changes and costs are significantly reduced.

Lower parts costs

Laser tube cutting lets you skip entire process steps such as sawing, drilling and milling. It also cuts down on storage and handling expenses. Compared to conventional tube processing, the laser significantly reduces part costs.

Minimize time investment

Innovative tube constructions reduce the need for downstream work such as welding and mounting. The positioning aid with pins and openings makes assembly much easier. High edge quality makes rework completely unnecessary in most cases.

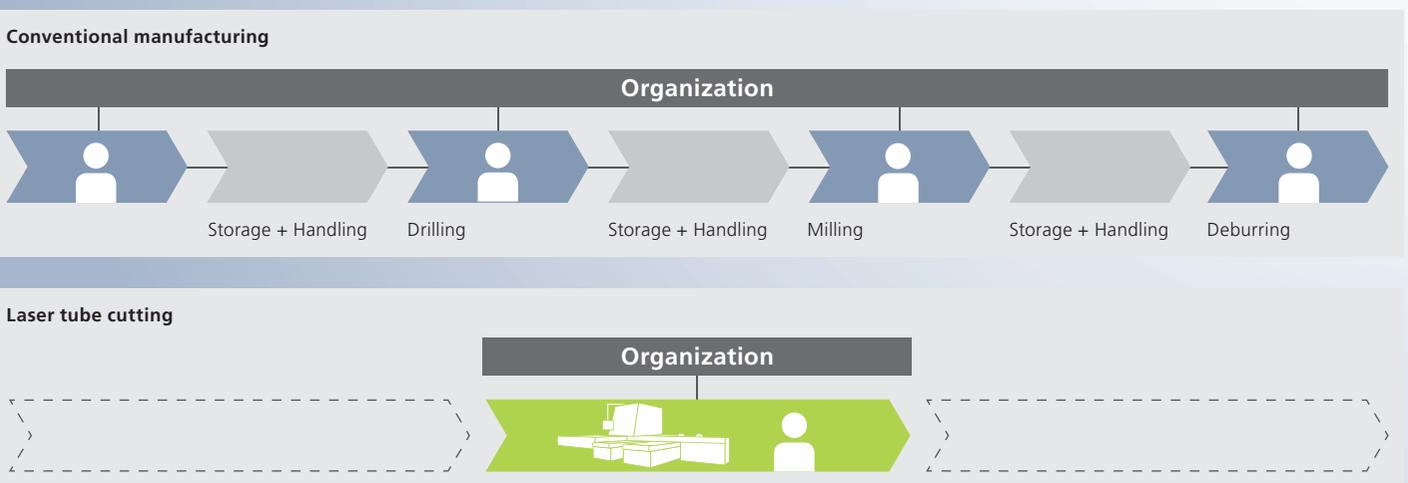
New business opportunities

Impress clients with products and design options which cannot be achieved, or are not economically feasible, with conventional methods.



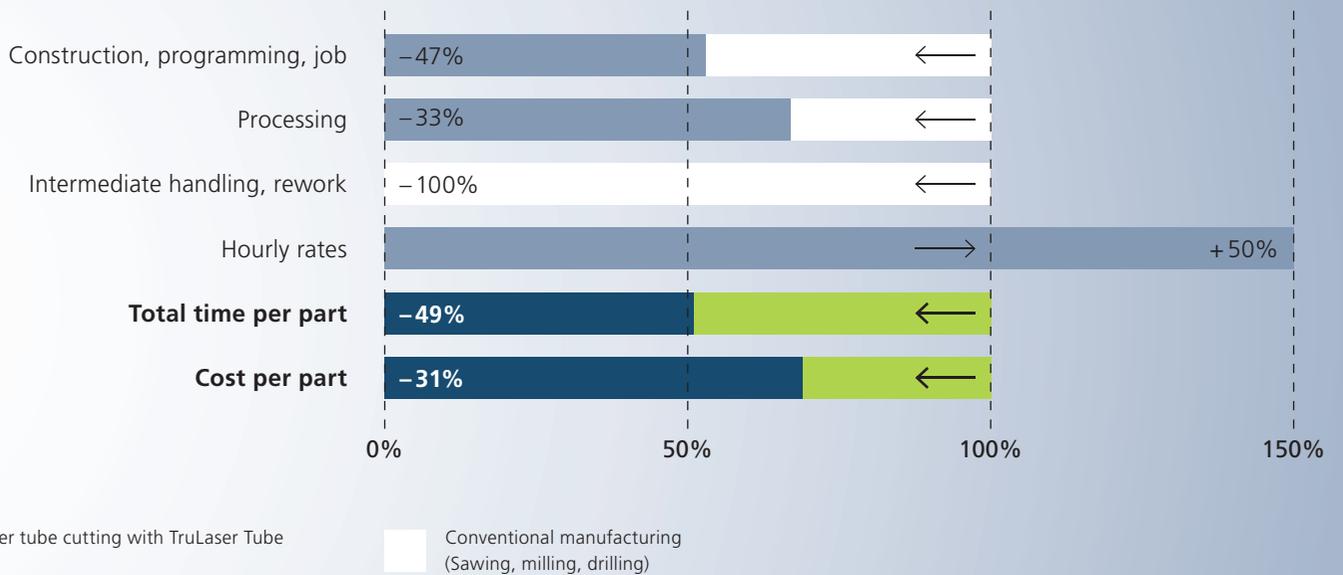
Flexible designer cable guide, cut from a single tube.

A comparison of the production steps involved in laser tube cutting and conventional manufacturing



Simply efficient

Using the example of a bending connection, laser tube cutting is 49% more time-efficient and 31% more cost-efficient per part.



Conventional welding of two separate parts.



Laser-constructed with bending connections and additional positioning elements.

The road to success.

With laser tube cutting, you will lay the foundation for long-term success. Be sure to get the right partner to achieve this. As the global market leader in laser technology and machine tool building, we set the pace for innovation in the market, and as such we offer you ideal solutions for the world of laser tube cutting.

Complete service

With TRUMPF there's no need to buy additional components. We are your single source for everything you need: machine, laser, automation, software and the support of our international service network.

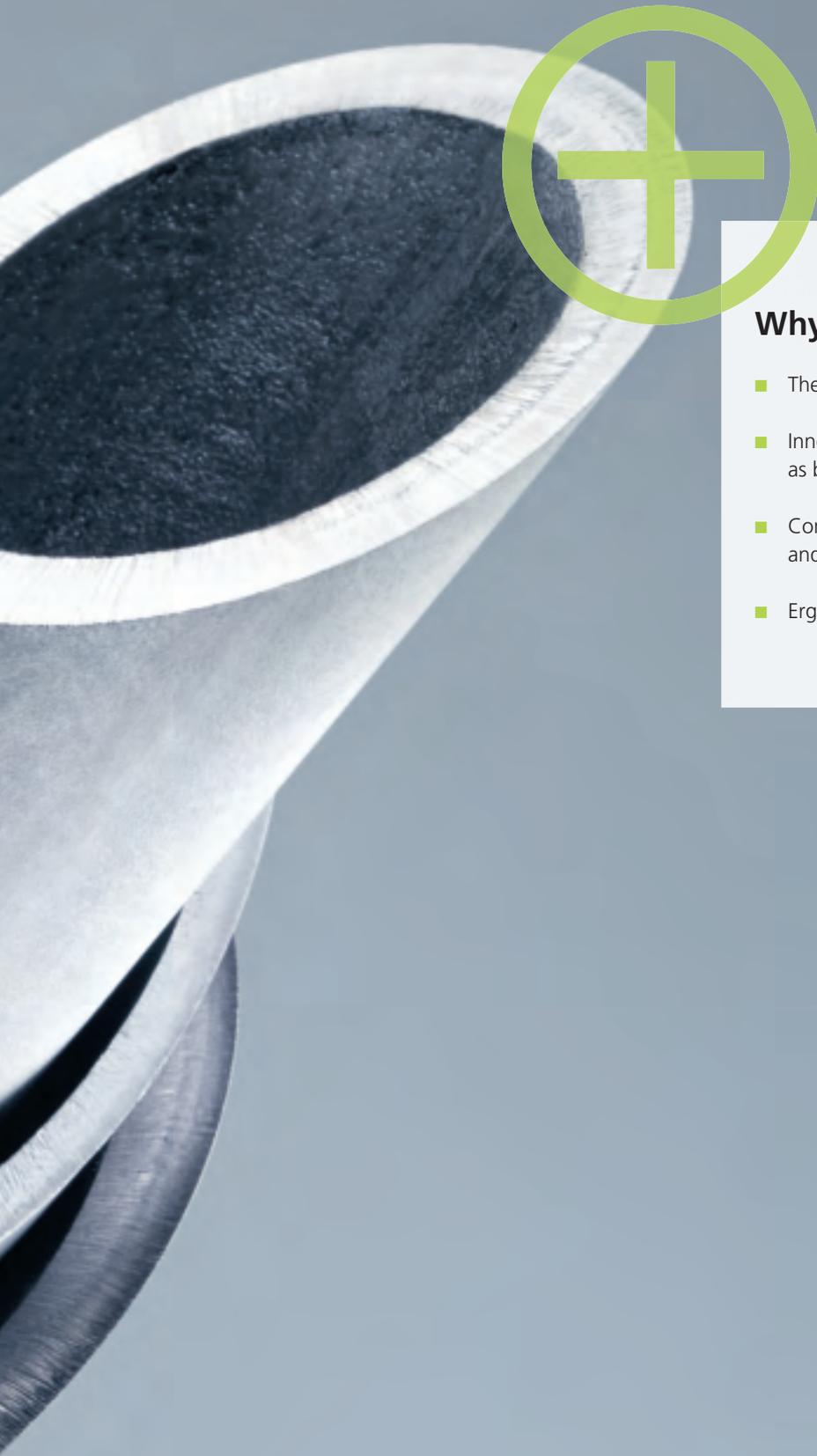
Knowledge comes standard

Hit the ground running with our trusted package: complete with an industrial-quality machine, simple controls, and technology and cutting data.

Set yourself up for future success

We invest well above the average in the development of our tube technologies to guarantee your success and keep you one step ahead of the competition.



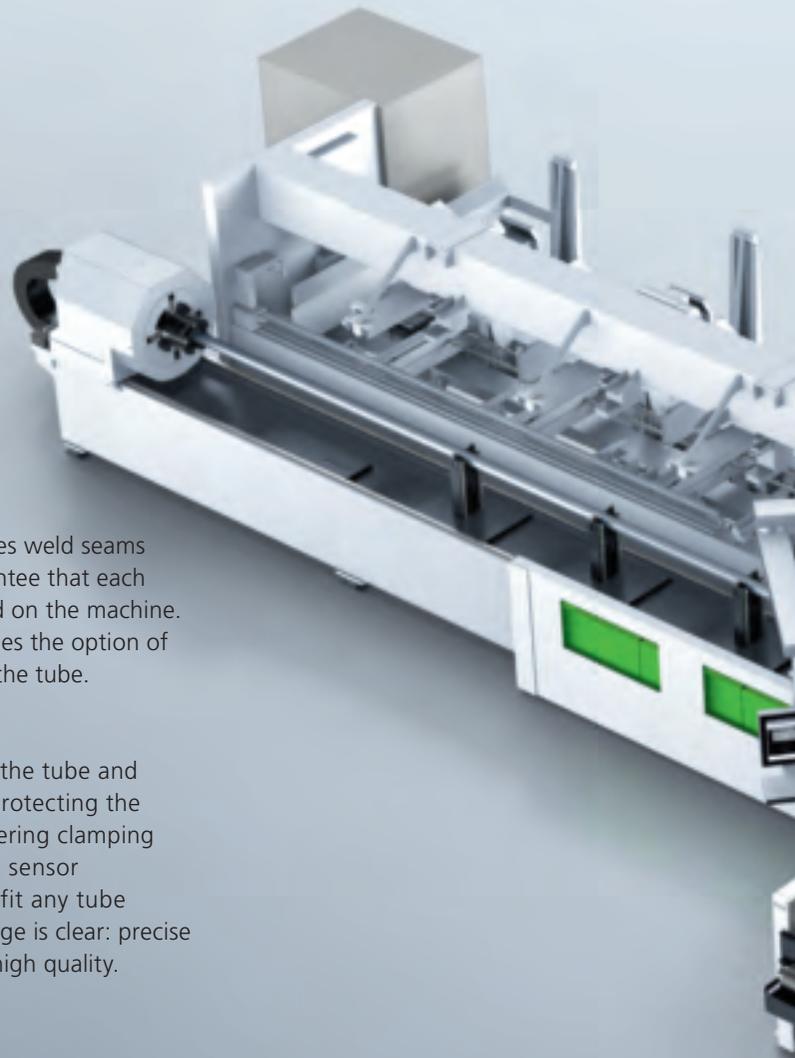


Why TRUMPF?

- The right laser
- Innovative features such as bevel cutting
- Comprehensive technology and cutting data
- Ergonomic machine concepts

Solutions that move you forward.

Our functional features and integrated knowledge support your tubes and profiles every step of the way through the machine. Each component is designed to achieve optimal results.



Loading

Automation

The LoadMaster Tube reduces setup time. Its tube magazines can hold up to four tons of raw material and loaded tubes are automatically verified before being fed for cutting.

Flexibility

The open and ergonomic machine concept even makes it easy to load individual tubes.

Smart features

Smart Profile Detection allows you to automatically load profiles with geometries that could previously only be loaded manually. This enables you to tap into new fields of application.

SeamLine Tube identifies weld seams and markings to guarantee that each tube is properly aligned on the machine. This feature also provides the option of scanning the inside of the tube.

Perfect clamping

Collet chucks position the tube and hold it in place while protecting the material. The self-centering clamping method with constant sensor monitoring adjusts to fit any tube geometry. The advantage is clear: precise results and consistent high quality.

Software

TruTops Tube

The TruTops Tube programming software lends a helping hand with more complex constructions. The 3D construction module makes it easy to perform complicated tube intersections.

TruTops Monitor

TruTops Monitor reduces idle times by gathering and analyzing machine data to inform you of any problems with the machine.

TruTops Fab

Take control of the entire production process with TruTops Fab. Handle quotations and invoicing, plan production, and monitor and operate your machines.

Cutting

Robust laser

At the core of TruLaser Tube is a high-powered TRUMPF laser. Choose between a TruFlow CO₂ laser or a TruDisk solid-state laser (SSL).

Intelligent cutting head

The single-cutting-head strategy reduces downtimes. The slim nozzle even allows you to process profiles with internal edges. A magnetic coupling protects the cutting unit during collisions.

Concentrated expertise

The machine includes a complete set of high-quality cutting data. TRUMPF technology guarantees quick results and the best possible cut quality right from the start.

Constant focal position

FocusLine guarantees the best cutting results by maintaining a constant focal position and automatically adjusting to fit material type and thickness.

Controlled piercing

Need to make small, precise piercing holes quickly and without damaging the material? PierceLine is the perfect feature for you.

Bevel cutting up to 45°

The bevel cut option with patented TRUMPF technology* opens up a whole new world of possibilities for designers. Expand your range of parts with high-quality bevel cuts up to 45°.

Unloading

Ergonomic design

The conveyor tables sit at an ergonomic height to make unloading much more comfortable. These also serve as a useful material buffer.

Gentle with material

Finished parts are discharged from the machine onto the conveyor table in a material-friendly way.

Smart

Your machine thinks along with you. Sensors detect whether a part has been properly removed or not – a real plus for your process reliability.



TruLaser Tube 5000 fiber

High-quality bevel cutting
up to 45°

Solid-state laser technology means quick and flexible processing. The TruLaser Tube 5000 fiber is built on these strengths like no other laser tube cutting machine.

01

4x
acceleration

02

Easy access
with the intelligent beam guard

01

4x
acceleration

With RapidCut, the solid-state laser's high feed rate is immediately noticeable on small contours. This represents a huge plus for productivity when processing thin sheet material.

02

Easy access
with the intelligent beam guard

Tube processing with a solid-state laser can also be performed without a complete housing – the TruLaser Tube 5000 fiber's open machine concept guarantees easy access. Individual tubes can be quickly and easily loaded and unloaded from the front.



Easy access makes loading a breeze.

Technical details		
Max. outer circle diameter	6 in.	
Max. raw material length	21/26* ft.	
Max. finished part length	10/15*/21*/26* ft.	
Max. weight of workpiece	13 lbs/ft (287/353* lbs. in total)	
Laser details	TruDisk 2001	TruDisk 3001
Max. output	2000 W	3000 W
Average power consumption in production	11 kW/h	13 kW/h
Max. material thickness		
Mild steel	0.3 in.	0.3 in.
Stainless steel	0.16 in.	0.2 in.
Aluminum	0.08 in.	0.16 in.
Copper	0.12 in.	0.12 in.
Brass	0.2 in.	0.2 in.

* Figure applies to larger model (optional).
Subject to alteration. Only specifications in our quote and order confirmation are binding.



04

Flexible and robust
as a result of our patented resonator design

03

Setup time
virtually none



03

Setup time
virtually none

Setup is now a thing of the past, with the TruLaser Tube 5000 fiber's clamping method. Tubes can be processed across the entire clamping range without the need for modifications.

04

Flexible and robust
as a result of our patented resonator design

TruDisk's patented resonator design allows it to stand up to the daily challenges of industry. Even processing non-ferrous metals is no problem at all. As part of a laser network, it can even feed to another TRUMPF machine.

The innovative clamping method removes nearly any need for setup.

TruLaser Tube 5000

High-quality bevel cutting up to 45°

This productive all-around machine is trusted worldwide to meet the daily challenges of industry. The ideal choice for newcomers to laser tube cutting.

01

Up to 13 lbs/ft
tube weight processing

01

Up to 13 lbs/ft
tube weight processing

The TruLaser Tube Series 5000's robust construction makes it unrivaled in its class for processing high tube weights. Process up to 13 lbs. of material weight per foot and up to 0.4 inch material thickness.

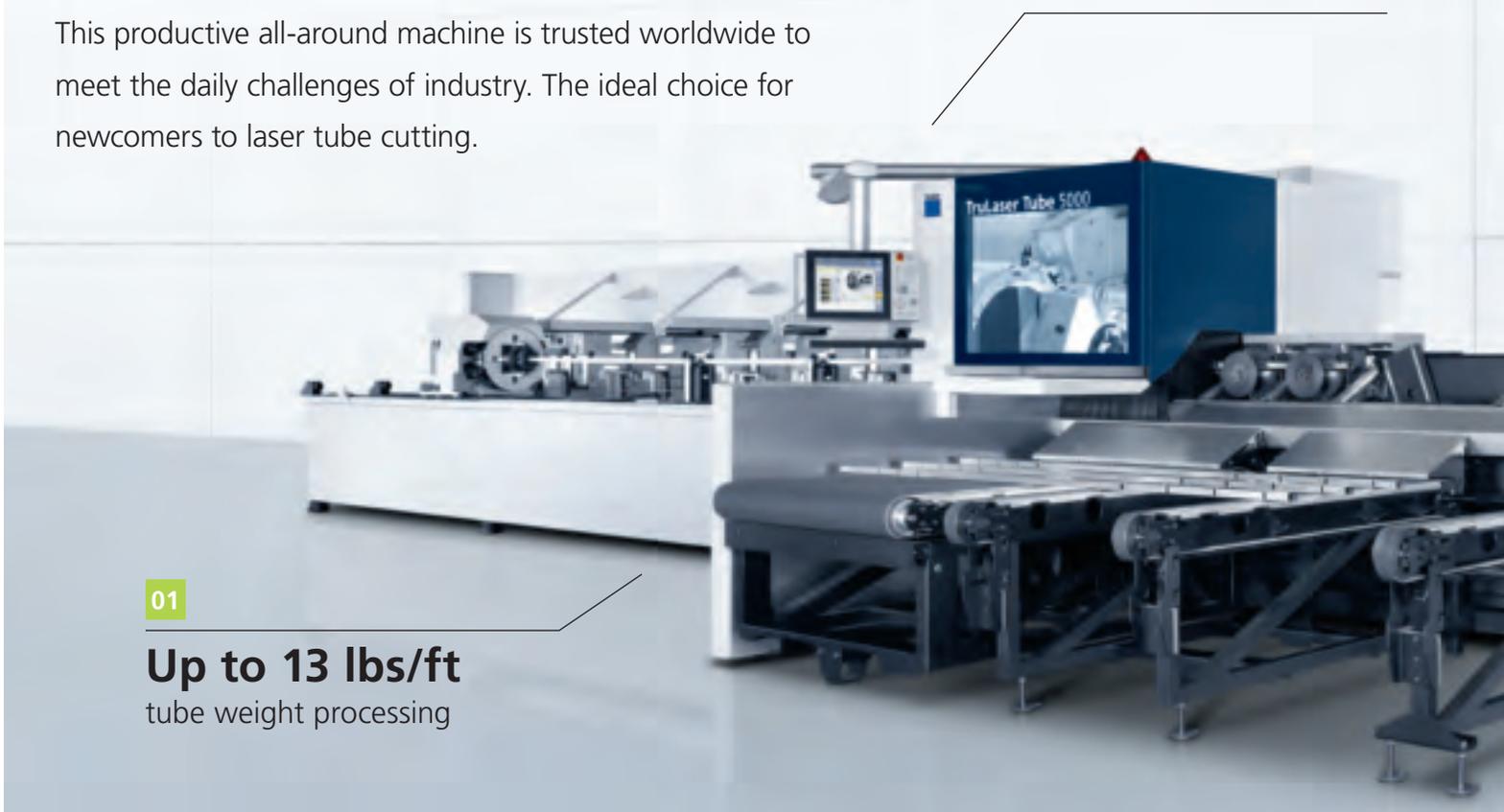
02

Edge quality
par excellence

Get the best possible edge quality, especially in thicker materials. The TruFlow CO₂ laser is reliable, robust and provides up to 3,200 watts of laser power.



The conveyor table ensures that finished parts are carefully removed.



Technical details			
Max. outer circle diameter	6 in.		
Max. raw material length	21/26* ft.		
Max. finished part length	10/15*/21*/26* ft.		
Max. weight of workpiece	13 lbs/ft (286/353* lbs. in total)		
Laser details	TruFlow 2000	TruFlow 2700	TruFlow 3200
Max. output	2000 W	2700 W	3200 W
Average power consumption in production	17 kW/h	20 kW/h	24 kW/h
Max. material thickness			
Mild steel	0.3 in.	0.4 in.**	0.4 in.**
Stainless steel	0.16 in.	0.2 in.	0.2 in.
Aluminum	0.12 in.	0.16 in.	0.16 in.

* Figure applies to larger model (optional). ** With Pierceline (optional).
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03

Meeting the daily challenges of industry
 with our proven machine concept

02

Edge quality
 par excellence



LoadMaster Tube for the TruLaser Tube 5000.

03

Meeting the daily challenges of industry
 with our proven machine concept

The world's best-selling tube cutting machine from TRUMPF provides reliable work and high productivity under a wide range of conditions.

TruLaser Tube 7000

High-quality bevel cutting
up to 45°

Our flexible high-end machine for
XXL laser tube cutting.

01

XXL

process tubes with diameters
up to 10 inches

02

Follow-up processes
included

01

XXL

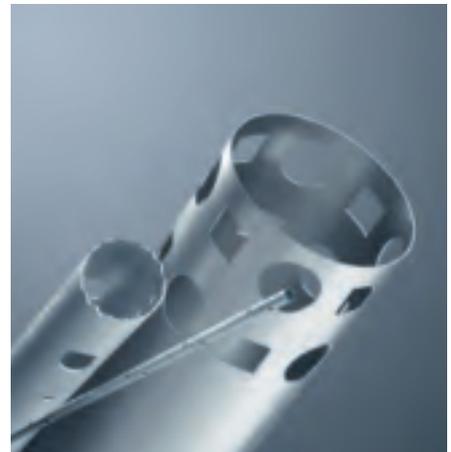
process tubes with diameters up to 10 inches

The TruLaser Tube 7000 is the choice for XXL laser tube cutting. Process tubes and profiles with diameters up to 10 inches and wall thicknesses of up to 0.4 inches in mild steel. The perfect machine for all jobs: Process small, rectangular, round and oval tubes.

02

Follow-up processes
included

The TruLaser Tube 7000 can also take on additional process steps such as inserting threads. The choice is yours: Use any class of tool in the standardized tool adapter. The catcher is an additional option which protects the interior of the tube against contamination, thus minimizing the need for rework.



Well-suited for thick, thin, small and large tubes.

Technical details			
Max. outer circle diameter	8/10* in.		
Max. raw material length	21/30* ft.		
Max. finished part length	10/15*/20*/21*/26* ft.		
Max. weight of workpiece	17 lbs/ft (331 lbs. in total) / 25 lbs/ft** (496 lbs. in total)**		
Laser details	TruFlow 2000	TruFlow 2700	TruFlow 3600
Max. output	2000 W	2700 W	3600 W
Average power consumption in production	20 kW/h	23 kW/h	26 kW/h
Max. material thickness			
Mild steel	0.3 in.	0.4 in.***	0.4 in.***
Stainless steel	0.16 in.	0.2 in.	0.25 in.
Aluminum	0.12 in.	0.16 in.	0.2 in.

* Figure applies to larger model (optional). ** Figure applies to model with 10 inch max. outer circle diameter (optional). *** With PierceLine (optional). Subject to alteration. Only specifications in our quote and order confirmation are binding.



04

Integrated part sorter
via flexible part-removal station

03

Minimal downtimes
with step rollers

03

Minimal downtimes
with step rollers

With the fully-automated machine settings, the TruLaser Tube 7000 performs with minimal downtimes. The step rollers, which support and guide the tubes laterally, automatically adjust to fit the diameter of the workpiece.

04

Integrated part sorter
via flexible part-removal station

The flexible part-removal station sorts the finished parts onto a movable conveyor table, into wire containers or into transport containers, as desired. All components can be placed freely.



The swivel-mounted conveyor system can be used for small lot sizes and custom profiles.

Your goals. Our company.

Always at your service. Our customized consulting and other support services are there for you and your machine every step of the way, before and after your purchase.



Machine tools for flexible sheet metal and tube work

We provide our customers with tailor-made machines and automation solutions, advice, software and services – in fact everything they need to reliably create high-quality products. From laser cutting and punching to bending and laser welding, our customers process the sheet metal and tube components that are required in all areas of our daily lives, including industry, household, communication and transport applications.



Lasers for manufacturing

From cutting, welding and marking to surface processing and additive manufacturing – we have the right laser and the right technology to achieve innovative and cost-effective production in any industrial application. Whether we're working on a macro, micro or nano scale, we are responsive to our customers' needs and skilled in providing them with appropriate system solutions, applications expertise, and consulting services.

More than 45 years

We offer the widest selection of lasers on the market and have the experience to back up our products.

From new- comers to pros

With training for laser tube cutting.

Tube Application Center

The Tube Application Center (TAC) is available to answer any questions you might have about laser tube cutting, from feasibility tests to programming.

One third of TRUMPF machines are financed

We offer flexible solutions with attractive conditions to help you finance the tools you need.

Your single source

For perfectly coordinated machines, automation and processes.

Design consulting

Design parts and assemblies to get the maximum advantage out of laser tube cutting.

Service network in more than 30 countries

Technical service: we offer one-of-a-kind technical customer service to save you time and money – all around the globe.

Current R&D quota of 9.8%

Industry 4.0

TRUMPF is your innovative partner on the road to smart factories.

TRUMPF



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