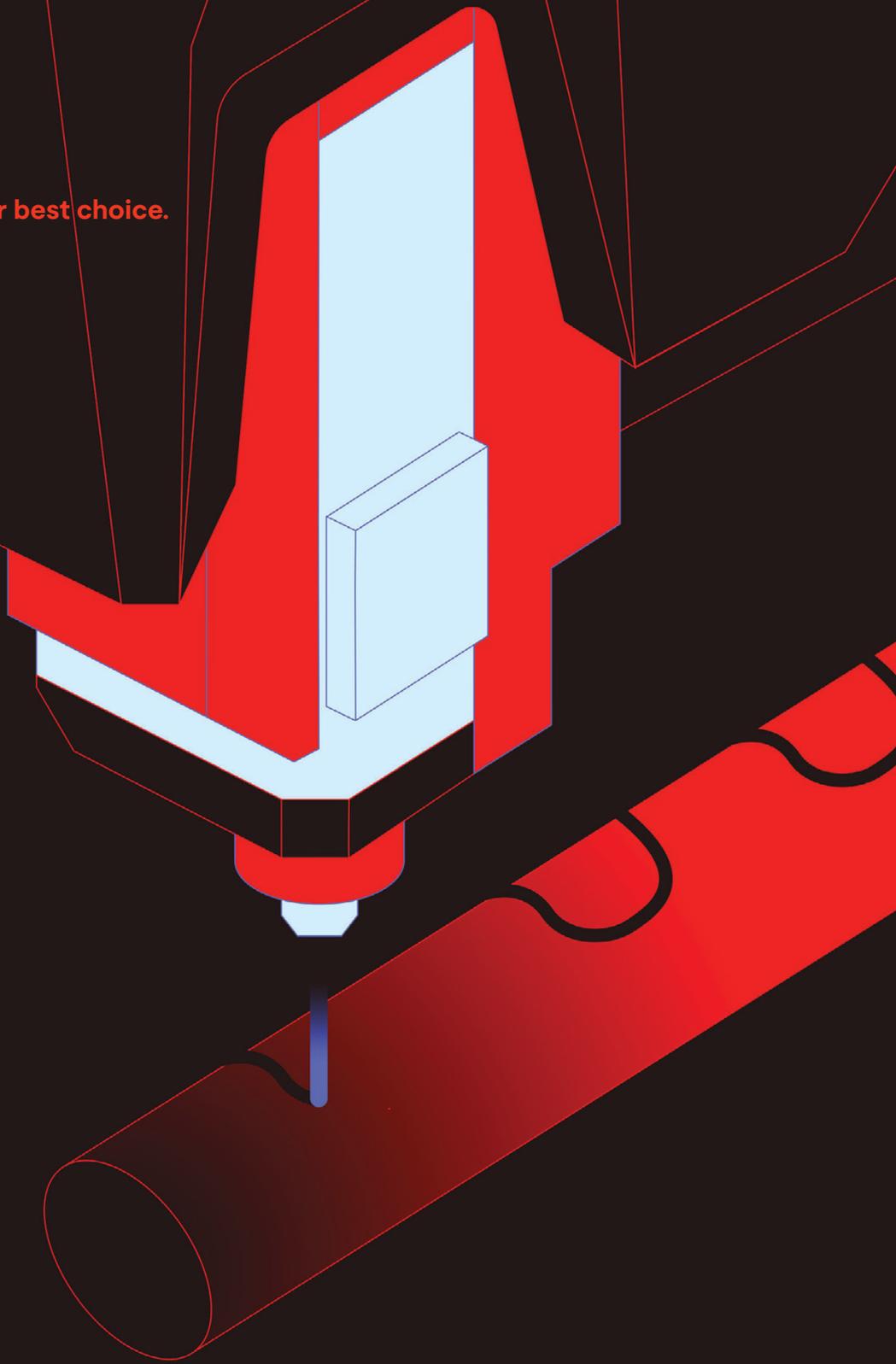
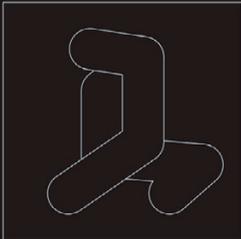
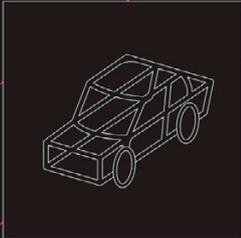
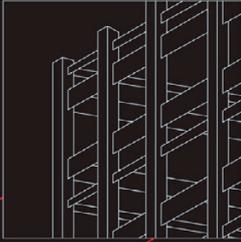


Bystronic

Your best choice.



Are tubes tightening your margin?

If so, read this Expert Guide.

bystronic.com

A revolution for your business

Are sawing, drilling, and cutting tubes and profiles exhausting your capacity?

That doesn't have to happen! **A tube laser** takes over production fully automatically, offering

more speed,
more precision,
more geometries,
more margin.

This **eliminates backups in the pipeline** of your orders.

Discover how tube lasers advance your production – and which machines are suitable for your operation.

Lower effort, higher output



Fewer work steps

What used to require costly handwork with different devices is now possible with one pass using a tube laser: Sawing, drilling, marking, tapping, and bevel cutting.



More precision

More precise cutting reduces work effort and opens up new possibilities for further processing. At the same time, material losses and energy consumption are minimized, resulting in sustainable production.



Higher capacity

Automation increases efficiency; weeks of work turn into hours.

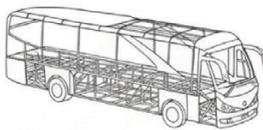


New market opportunities

Tubes and profiles are in increasing demand in a wide variety of applications. Whether for your own production or as a supplier: Enterprises with a tube laser can profitably take advantage of these market opportunities.

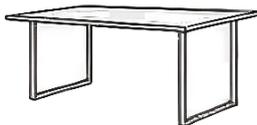
From Road to Roof: The Versatile Power of Tube Laser Technology

Tube laser cutting has evolved into an indispensable manufacturing technology across an impressive spectrum of industries. The ByTube Star 130 and ByTube Star 330 from Bystronic deliver precision and flexibility that meet the demanding requirements of today's most dynamic sectors.



Automotive & Transportation

Beyond chassis construction, tube processing plays a critical role in manufacturing roll cages, subframes, exhaust systems, roof racks, and seat structures for cars, buses, and yellow goods. The technology enables light-weight yet robust constructions essential for modern vehicle design and safety standards.



Furniture & Interior Design:

From the skeletal frames of office chairs and designer seating to table bases, bed frames, shelving systems, and modular storage solutions—tube laser cutting brings both structural integrity and aesthetic precision to contemporary furniture manufacturing. The clean cuts and complex joint preparations enable seamless assembly and refined finishes.



Construction & Engineering:

Tube profiles form the backbone of railings, staircases, scaffolding systems, structural supports, and architectural features. For event construction, tube processing creates versatile housing structures, truss systems, and modular frameworks that combine stability with rapid assembly.



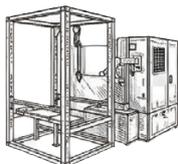
HVAC Systems:

Ventilation frameworks, ductwork connections, mounting brackets, and distribution systems rely on precisely cut and shaped tubes to ensure efficient airflow and secure installations in both commercial and residential applications.



Fitness & Sports Equipment:

From weight machine frames and cable systems to squat racks, benches, and specialized training equipment – the fitness industry depends on tube laser technology for durable, precisely manufactured components that withstand constant use and heavy loads.



Industrial Machinery:

Tube profiles are essential across countless machinery applications: protective guards, conveyor frames, machine housings, handling systems, and structural components that require exact specifications and repeatability across production runs.



The potential reaches far beyond these segments – from agricultural equipment and medical devices to retail displays and custom fabrication projects. Tube laser cutting technology transforms hollow profiles into precision-engineered components that combine strength, weight optimization, and design flexibility across virtually every manufacturing sector.

Huge market opportunities for tubes

Tubes and profiles are central components of machines, vehicles, buildings, and devices. As such, precise cuts are growing increasingly important for modular constructions and safety-relevant parts.

Tubes and profiles are used almost everywhere. As components for fitness machines, furniture, machines, pipelines, solar installations, and buildings, they have applications in various sizes and forms.

According to a study by Horizon Grand View Research, **the market for tube laser products will grow by around 3.7% annually through 2030.**

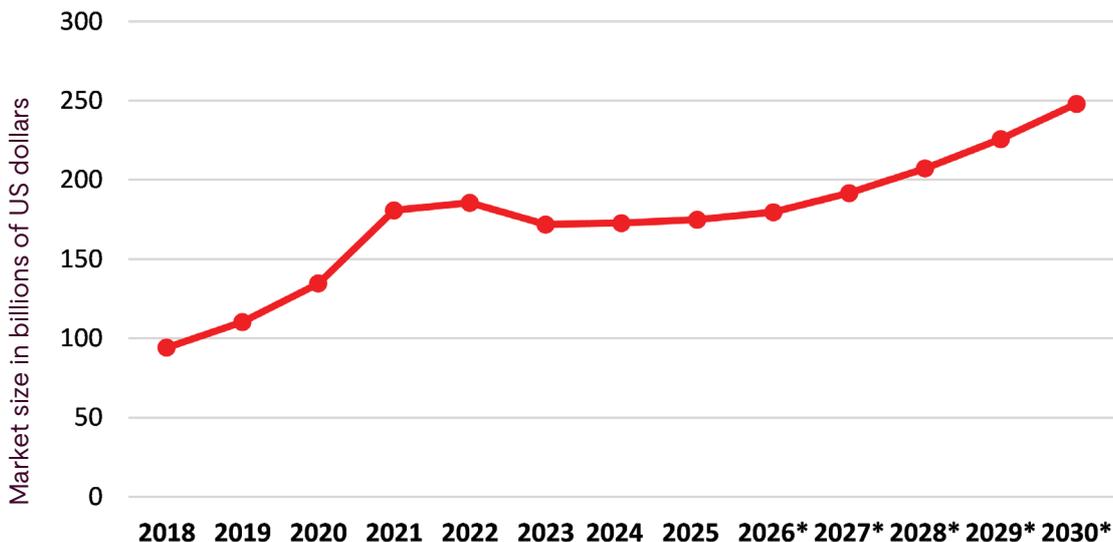
At the same time, in today's industrial production, **"mass customization"** is in increasing demand. Tube lasers support this type of production, in which automation and the production of individual components work together.

In doing so, processing tubes and profiles with tube laser technology enables high-precision cuts along with efficient production. Thus even **safety relevant components** can be manufactured, such as parts of load-bearing structures.

High precision also allows for the design of **modular components** that are increasingly in demand in the furniture, machine, and construction industries.

For sheet metal processing enterprises, a tube laser is also an investment in the future. Those who equip themselves today will be prepared for future orders.

The global market for steel tubes and profiles is growing
By 2030, demand will increase by approximately 50%



*:Forecast

“Tube lasers are a key technology in the metal industry”

A tube laser supports businesses that run up against their capacity limits – creating market opportunities for everyone.

What does a tube laser offer?

Daniel Brenner: Tube lasers combine a wide variety of work steps such as sawing, milling, and marking. Some machines even integrate drilling, tapping, and bevel cutting. In doing so, not only does production change, but also the product: Tubes and profiles can be connected with better precision, installed more easily, and designed more intelligently. Tube lasers are therefore a key technology for the metal industry of tomorrow.

What are the differences among tube lasers?

For businesses, the main difference lies in the type of production a tube laser is oriented toward, requiring speed or flexibility. A bundle loader enables full automation, while a chain loader guarantees efficiency despite tube variation. And then the potential sizes of tubes naturally play a decisive role.

What else needs to be considered when choosing a machine?

Something that is often overlooked is that not only the length and the diameter are crucial, but also the maximum tube weight that the machine can carry.

Is a 3D cutting head a necessity today?

Not at all. 3D tube lasers enable bevel cuts for mechanical joining using tabs and grooves, which is becoming more important with the trend toward modularity. In fact, the majority of required cuts can be covered with a 2D laser. And for thinner tube thicknesses, a 2D cut can even often be advantageous.

What are the benefits of 2D cutting heads?

For thin materials, the rake angle only plays a marginal role; at the same time, bevel cuts are not as precise as they are in thicker materials. Because when the cutting head is tilted, the distance between the holder and the cutting interface is greater. In thin materials, this leads to vibrations. It is also not the case that a 3D tube laser is the ultimate answer for everything. To the contrary, for some operations, a fast 2D tube laser is just right.

What makes a tube laser reliable?

For tube lasers, reliability has two meanings: Cut precision and durability of the machine. In this matter, Bystronic relies on the coordination of software and clever mechanics. A good example of this is our “QuickCut” feature. It enables an additional movement of the cutting head along the tube axis. As a result, not only do the processing speed and precision increase, but the load on the machine is also greatly reduced, as the tube itself needs to be moved less.



Dr – Ing. Daniel Brenner

**Global Head of Marketing & Sales Support Tube
Bystronic**

“Not only does production change, but also the product.”

Two options for greater efficiency

Not all tube lasers are the same – that is why it is important to know the specialized strengths of machines in order to bolster your own business.

There is a wide variety of in-demand tubes and profiles. This means that for maximum efficiency in manufacturing it is necessary to have machines that are optimized for different kinds of production.

The tube lasers from Bystronic have therefore been optimized for different production styles. At the same time, both are suitable for all profile geometries and materials.

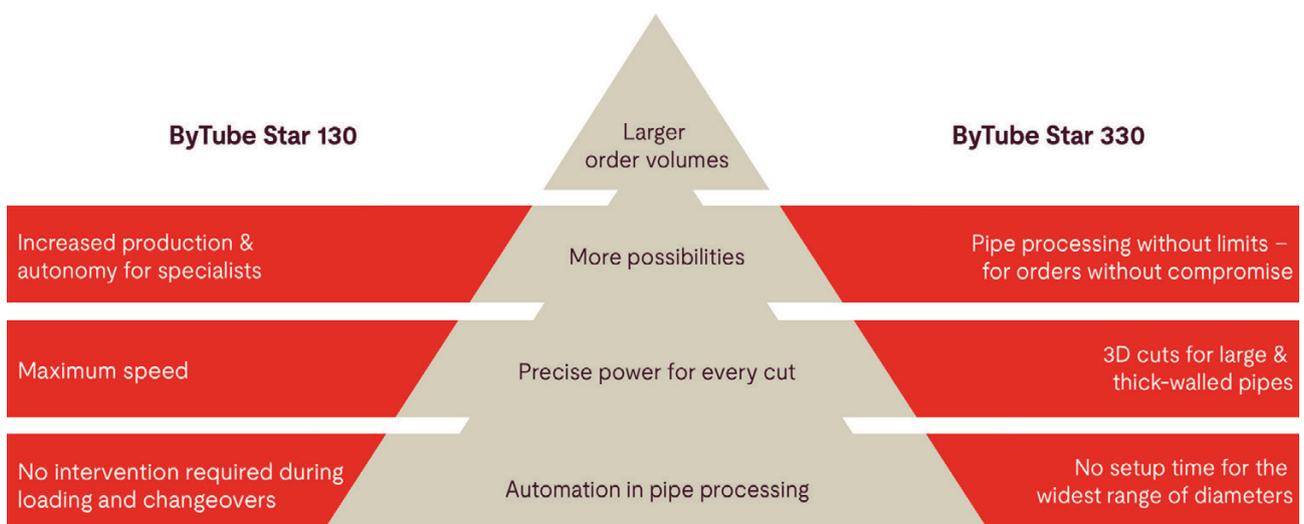
The **ByTube Star 130** specializes in processing tubes with diameters of up to 5.12 in. and a weight of up to 37.48 lb./ft. In this area, it cuts with record speed.

It is therefore the perfect machine for **businesses that rely on speed in mass production**, such as furniture manufacturers.

The **ByTube Star 330** knows no limits when it comes to tube processing. It is suitable for a particularly wide range of tubes, with up to 42 ft. in length for heavy tubes (143.3 lb./ft.) with large diameters (12.75 in.). And your tiltable 3D cutting head enables bevel cuts.

The machine thus offers maximum flexibility and is the solution for businesses that need to manufacture **varying quantities and geometries as a supplier**.

Both models can be individually fine-tuned to your requirements. For this purpose, different configurations in the maximum unloading size are available for selection.



Save time with the ByTube Star 130

This tube laser is suitable for anyone starting off in serial tube processing or looking to increase their capacity and efficiency. Because those who cut on their own instead of buying are able to reduce fixed costs and supply components exactly when they are needed.



High Speed:

Thanks to a bundle loader and rotational speeds starting from 250 rpm as well as axial linear speeds of 200/60/60 rpm.

Up to 37.48 lb./ft:

For example, a stainless steel tube ($\rho \approx 17.637$ lb./ft.³) with an external diameter of around 5.12 in. and a wall thickness of 0.20 in.

Fully automatic:

Operation suitable even for beginners. For tubes of up to 27.89 in. in length and 5.12 in. in diameter.

Flexible:

Fully integrated machines available in different loading and unloading lengths.

Is this machine right for you?

Our experts can support you with your decision.
Book an appointment for consultation now.



Become an all-rounder with the ByTube Star 330

This tube laser masters three dimensions and a variety of tube sizes. It thus enables fast processing of variable orders. A tube laser for anyone looking to get ahead with tube processing.



3D-cuts:

The tiltable cutting head enables tailor-made bevel cuts and countersinks.

Up to 143.3 lb./ft.:

For example, a stainless steel tube ($\rho \approx 17.637 \text{ lb./ft.}^3$) with an external diameter of around 1 ft. and a wall thickness of 0.31 in.

Variety:

10 kW of power and MixGas for extremely high cutting quality, even with thick tube walls. For diameters up to 1.06 ft. and tube lengths up to 42 ft.

All-in-one:

With integrated driller and tapper.

Flexible:

Loading with bundle, slot, or chain loaders. Machines available in right- and left-handed configurations with three different loading and unloading sizes and movable unloading conveyors.

Is this machine right for you?

Our experts can support you with your decision.
Book an appointment for consultation now.



Smart innovation for the best cut

These features turn your tube laser into more than a machine:
They guarantee automation from planning to quality monitoring.



Laserscan & Weld Search Camera

Deviations from the tube geometry and welding seams are detected by the Laserscan and camera, and the cutting process is automatically adjusted accordingly for maximum precision.



Quick Cut

An additional linear axis on the cutting head ensures the highest speed with maximum quality. And through the combination of different machine movements, the highest acceleration value is achieved.



BySoft Cell Control Tube

CAD/CAM software ensures fully automated cutting: From visualization of parts through to monitoring, the software enables the optimization of the production process.

Facts & Figures

ByTube

Star 130

Star 330



Tube diameter

0.4 – 5.12
inches

0.75 – 12.75
inches



Max. loading length

27.89
feet

42
feet



Tube weight

< 37
pound/feet

< 143
pound/feet



Laser power

3, 4
kilowatts

6, 10
kilowatts

How to get started

A tube laser fundamentally changes production processes and logistics. These factors should be considered before acquisition.



Choosing the right machine: Who are your customers? Which products do you want to offer? And what are your production processes? Select the machine that you can integrate the best.

Obtain quotes: Request quotes from different providers. Have each of them create a comprehensive business case with a time study.

Plan production: In order to optimally integrate your machine into your production, the Bystronic tube laser is available in different sizes. When purchasing a tube laser, think early on about loading and unloading as well as storage automation.

Make space: Tube lasers do not fit easily into every production hall. In a timely manner, decommission old machines that will become superfluous due to the tube laser. Valuable space can also be made through the use of mobile bending machines.

Build expertise: Operating a new machine is something that needs to be learned. Plan training sessions to make the introduction to tube lasers easier for your employees.

Which machine is right for you?

Our experts can support you with your decision.
Book an appointment for consultation now.



Good to know

Why is a tube laser a technological advancement?

Tube lasers massively improve precision and efficiency in sheet metal processing. They replace numerous manual work steps, eliminate sources of error, and ensure resource efficiency.

Is a tube laser beneficial even for small businesses?

Yes. Because the gains in efficiency are substantial – and operation is easy. However, a prerequisite is naturally having enough orders to operate the machine at capacity.

Is a tube laser suitable for getting started with profile processing?

Yes, because if you produce on your own instead of buying, you are independent and increase your margin. The operation of Bystronic tube lasers is intuitive, and the machines take over all necessary processing steps. They thus require only limited resources during operation and can also be integrated relatively easily.

Which new markets are opened up by a tube laser?

Tubes and profiles are needed almost everywhere: Examples include guardrails, cars, solar installations, and machines. In particular in the area of modular construction, tubes and profiles are gaining in importance across various industries. Because modularity saves labor, reduces costs, supports sustainable construction, and offers flexibility. Using tube lasers, the necessary modular components can be produced without complications.

Are there special challenges with 3D cutting?

When the laser beam hits the cutting surface at an angle, the cutting thickness is increased and the laser must be adjusted accordingly. The “kerf,” or the thickness of the beam, also changes. Bystronic has therefore developed a control system that adjusts the cutting process optimally.



Bystronic

Your best choice.

Request a consultation appointment now!

Check with us to see if a Power Upgrade is worth it for you.
Book an appointment for consultation now.



[bystronic.com](https://www.bystronic.com)