CATHARINA DAUM

# “Passion is part of the deal”

**It was just over a year ago that Tobias Richter invested in a TruLaser Tube 7000. Since then, the staff of what was then a three-man shop has more than doubled and the young business – ProfiLaseRichter in the Saxon town of Chemnitz – has advanced to become a specialist for tricky pipe and tube designs.**

**Mr. Richter, you use just a single machine, the TruLaser Tube 7000, in your company. That is more than unusual. How did this come about?**

I have been involved in laser cutting since as early as 1993. As an operator and programmer. During that time I used 2D laser cutting machines equipped with the RotoLas option to machine tubes. However, I constantly battled with precision demands and the time consumed by setting up the job. This is ok if one is just processing tubes once in a while, but not if it’s the main business.

In 1997 I went into business for myself and in the job shop, now my own, I was again confronted with these this problems. When personal reasons prompted me to leave that firm, it was clear to me that I still wanted to be my own boss, but also that I would not launch a competitive business. I visited an in-house trade show at TRUMPF and, for the first time, took a closer look at the TruLaser Tube 7000. I was very impressed by what this machine can do. That is why I put all my eggs in that one basket and invested in that machine.

» **As soon as I started working intensely with the TruLaser Tube 7000, I became aware of the enormous benefits it actually brings with it.**

Tobias Richter, CEO ProfiLaseRichter KG

**Certainly a courageous step. What made you so sure of success with just a single machine and while concentrating on using the laser to cut blanks from tubes?**

Experience had showed me that using the laser to machine tubes pays off whenever you have to make more complex cuts – when cutting curves, for instance. Of course, that won’t work for a lone job shop that only processes tubes from time to time. Instead my idea was to render this service for others. I was able to build my business thanks to the large network of companies with which I had established good relationships in previous years.

**And did your plan work out?**

In every respect! As soon as I started working intensely with the TruLaser Tube 7000, I became aware of the enormous benefits it actually brings with it. This is far more than simply saving time when setting up a job. Thanks to the degree of automation in the machine it can, for example, load bundles of pipes and measure cross-sections and pipe lengths offline. This means that we shorten our throughput times and can ship to customers more quickly. I was very impressed by the flexibility in the design of our components which the machine is offering, for instance with the bevel cut function. And, apparently, our customers were also impressed. Today I produce for job shops that specialize in making up 2D blanks and who need tubes so that they can offer complete assemblies. But metalworking and furniture shops, along with vehicle builders, are also among my clientele. We also deliver to the illumination industry, manufacturers of gym equipment, and many more.

**Your three-man shop has more than doubled in the meantime. Everybody works on one machine. How does that work?**

Since we primarily produce medium-sized batches, numbering from one to the low hundreds, the effort required for programming is naturally greater than for mass production. Each day one or two of my programmers are fully occupied with preparations for two-shift operations and often, in fact, a third programmer is needed for the second shift. Of course it is wonderful if we land a long-term order with high piece counts. But from the very beginning we wanted to position ourselves as a partner for the vexing tasks. We have the experience and all the potential that's needed here.

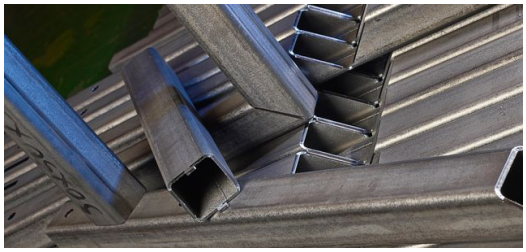
**What materials do you work on your machine?**

We work pipes and tubes – up to six meters long – made of mild steel, stainless steel and aluminum. The gauges are up to 15 millimeters for mild steel, eight millimeters for stainless steel and five millimeters for aluminum. We determined ourselves the cutting parameters for the special thicknesses, beyond the standard gauges. With this machine we can work profiles with outer circle diameters as much as 254 millimeters. And with the technology package for bevel cuts we can execute high-quality 45° cuts in all the materials and thicknesses. The great cutting speed also makes this highly productive. The supplementary investment for this option is indeed nothing to be sneezed at, but our customers are enthusiastic about the manufacturing options that result. It has proven that clients are definitely willing to spend a little bit more if they are looking for exact chamfers to guarantee highly precise and smooth welding seams.

**What other special features does your machine have?**

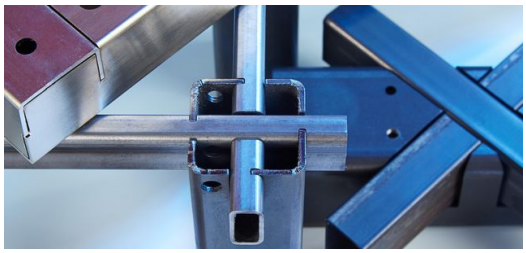
We have weld seam detection, which is certainly worthwhile when executing higher piece counts in automatic operation – and adaptive clamping devices so that we can machine open profiles. One major topic is minimizing slag spattering in circular profiles and we achieve this with the spatter guard protection. A LoadMaster makes sure that the loading process is reliable and it goes without saying that machining causes very little marring.

With the TruLaser Tube 7000 the tube specialists of ProfiLaseRichter have opportunities that many customers don't even know, yet. Examples are bending connections and also positioning aids with locating pins and cut-outs to simplify assembly. Thanks to the degree of automation in the machine the throughput times are shorter and so are the delivery times. Picture: Escherich Fotografie



The technology package for bevel cuts provides high-quality 45° cuts. The great cutting speed also makes this highly productive. Picture: Escherich Fotografie

Each day one or two of the programmers are fully occupied with preparations for two-shift operations. The TruTops Tube Software makes possible exact calculation of cutting geometries. Picture: Escherich



The TruLaser Tube 7000 cuts tubes and profiles with outer circle diameters of up to 254 millimeter. Complex calculations at corners of rectangular profiles are automatically handled by the TruTops Tube software. Picture:

Fotografie

Escherich Fotografie

The 3D CAD system made by TRUMPF already contains, and automatically suggests, numerous design aids for tubes and profiles. A custom solution for unusually complex structures puts ProfiLaseRichter in a position to offer services entirely beyond the usual standards. Picture: Escherich Fotografie

**It happens ever more frequently that customers want to order complete assemblies. How do you deal with this?**

I am quite aware of this demand and I have my own special way of handling this. Many people think that they have to procure their own machines and hire operators to satisfy the requirement. My approach is different. The people and the machines always have to be used to full capacity and that robs me of flexibility. That is why I put my faith in reliable partners and cooperate with them when I offer assemblies.

**How might we picture this process?**

Customers often arrive with a very concrete concept and an engineering drawing. We read in the data they provide and rework them in regard to the tube structure. To do this we use the 3D CAD system made by TRUMPF. It already contains, and automatically suggests, numerous design aids for tubes and profiles. Our machine often presents opportunities that the customer is completely unaware of. Examples are bending connections and also positioning aids with locating pins and cut-outs to simplify assembly. There are also encoding tabs and slots to make sure that the parts are in the right position when assembled. We coordinate all the processing with our partners while we build, at the highest precision, the tube structure. A 2D laser shop cuts, punches and bends the panels. And with my experience in the field of job preparation, I ensure that ultimately everything fits together and functions properly. Of course, that also works the other way round. We are the ideal partner for job shops when they require complicated tube structures at reasonable prices. Everyone does what they can do best. This is a network that is of great benefit to the customer.

**You've accomplished a lot in one year. What are you especially proud of?**

I am particularly proud of my staff! They are a great team and they all bring their excitement and special talents to bear – for the wellbeing of the company. One developed, for example, a custom solution for unusually complex structures and linked tube nesting to a database which we programmed ourselves. This puts us in a position to offer services entirely beyond the usual standards. That was, and continues to be, our objective.

*This article was first published in July 2015.*

**The tube specialists**

## Who:

ProfiLaseRichter, Chemnitz, founded in 2014, seven employees, <a href="http://www.plr-chemnitz.de">www.plr-chemnitz.de</a>

## What:

Cutting blanks from tubes and profiles

## How:

TruLaser Tube 7000 ProfiLaseRichter is a specialist for tricky pipe and tube designs.

**CATHARINA DAUM**
TRUMPF MEDIA RELATIONS, ЛИЦЕ ЗА ВРЪЗКА С МЕДИИТЕ