

Efficiency and speed: the TruLaser Cell 5030 combination for success for prototype construction and small-series manufacturing

The rapid prototyping service provider, 3-Dimensional Services, found its "dream machine" for prototype production and small-series component manufacturing in the TruLaser Cell 5030. As a test customer, the company from Detroit, USA was closely involved in the development of the new TRUMPF 3D laser cutting machine from the beginning. Working together with TRUMPF, it was able to implement many of the requirements for the machine over the course of the partnership, which spanned more than two years.

3-Dimensional Services Group

www.3dimensional.com

The 3-Dimensional Services Group develops and produces functional prototype parts and components for the production of small and medium-sized series – up to 70% faster than the industry standard. The family company, founded in 1992 and is based in Rochester Hills, a suburb of Detroit, works mainly for customers from the automotive industry. Its range of services covers virtually all production processes within sheet metal processing, casting and plastic injection molding.

NUMBER OF EMPLOYEES	INDUSTRY	COMPANY HEADQUARTERS
450	Rapid prototyping	Detroit, USA

MACHINERY BY TRUMPF (SELECTION)

- 4 x TruLaser Cell 5030
- 2 x TruLaser Cell 7040 fiber
- 2 x TruLaser 2030
- 2 x TruLaser 2030 fiber
- 3 x TruDisk 4001
- 1 x TruDisk 6602
- 1 x TruDisk 8002
- 1 x TruFiber 400

Challenge

With regard to a new laser cutting machine, the 3-Dimensional Services Group knew exactly what it wanted: a high-performance, compact system offering great value for money for the company. A system able to keep up with the large high-end machines in terms of technology, and which impresses with good handling. This being said, speed was not to be overlooked – because in prototype and small-series manufacturing, new manufacturing orders constantly need to be set up. Parts need to be provided to the customer for testing very quickly, and are then optimized together. The laser processing system must therefore be extremely efficient and flexible. It must also be possible to carry out maintenance and repair work as quickly as possible, in order to prevent long machine downtimes. In short: a machine for prototype production was required, which works almost as fast as premium production machines, while at the same time meeting 3-Dimensional Services' desired price range.



"Why did we enter into a partnership with TRUMPF? Because it's like working with another big family. Everyone listens to each other's needs and then producing a product that we can go forward with."

MIKE BARANOWSKI
QUALITY DIRECTOR 3-DIMENSIONAL SERVICES GROUP

Solutions

3-Dimensional Services has wanted to work together with TRUMPF since the company's establishment 30 years ago. However, for a long time TRUMPF's universal machines had been too expensive and too comprehensive in their capabilities for the young company's purposes. About two years ago TRUMPF approached the managing board of the 3-Dimensional Services Group, asking, "what would your 'dream machine' look like and what would it need to be able to do?" Over the next 24 months, TRUMPF and the rapid manufacturing service provider worked in close cooperation to develop the TruLaser Cell 5030. According to founder and CEO, Alan Peterson, a great deal more than just their own requirements had been fulfilled. The TruTops Cell offline programming system allows for cutting on the machine to be carried out continuously, and jobs to be switched very quickly. The cutting speed is four to five times

faster, allowing 3-Dimensional Services to optimally fulfil the requirements of their own customers. The main reason for this is the laser beam of the solid-state laser, which in TRUMPF's machines moves over the stationary workpiece quickly and efficiently. The TruLaser Cell 5030's very fast door mechanism was also regarded as a "unique feature" by the Detroit company. This allows operators to load and unload the machine quickly.

Implementation

TRUMPF invited Alan Peterson to Ditzingen many times. There, the CEO experienced how the TruLaser Cell 5030 was constructed and tested, step by step. According to Peterson, the TRUMPF developers were very open to any comments and suggestions throughout the entire process and were grateful for the valuable customer feedback. Even the suggestion regarding the positioning of lifting rings – which are intended to make transporting the machine into the production hall easier – was taken into account during implementation. Accordingly, the installation of the early beta system at 3-Dimensional Services was quick and uncomplicated. There was virtually no downtime. According to Peterson, it was only when TRUMPF visited to install an update with the latest features that the machine stood idle for a short period. The company leader was also impressed by the intuitive machine control, which made training new employees considerably easier.



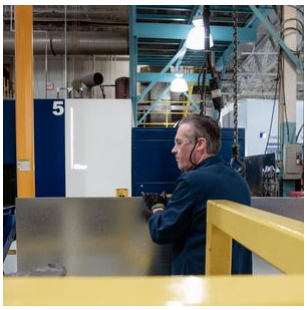
"With the TruLaser Cell 5030 TRUMPF is gonna have a very bright future."

ALAN PETERSON

PRESIDENT OF 3-DIMENSIONAL SERVICES GROUP

Forecast

With the TruLaser Cell 5030 TRUMPF has, according to Peterson, introduced a machine for job shops, tool shops and smaller production halls to the market. A machine which is 30% smaller than a full-sized production system and yet fulfils 95% of the requirements of a job shop handling small to medium-sized quantities. This makes the TruLaser Cell 5030 a flexible, cost-efficient "win-win machine" which, according to 3-Dimensional Services, will bring TRUMPF a rosy future. The Detroit company boss has already ordered three additional models. The goal therein remains clear: to bring parts to customers as quickly as possible, so that they have time to test the quality and functionality of the components, carry out design changes and produce the optimized parts within large-series production together with 3-Dimensional Services, as quickly as possible.







Find out more about our product



TruLaser Cell 5030

Would you also like a compact system for flexible 2D and 3D laser cutting which offers great value and is technically comparable to larger high-end machines, just like 3-Dimensional Services? Find out how you can benefit from the TruLaser Cell 5030, especially with small to medium lot sizes and frequent component changes.

Zum Produkt