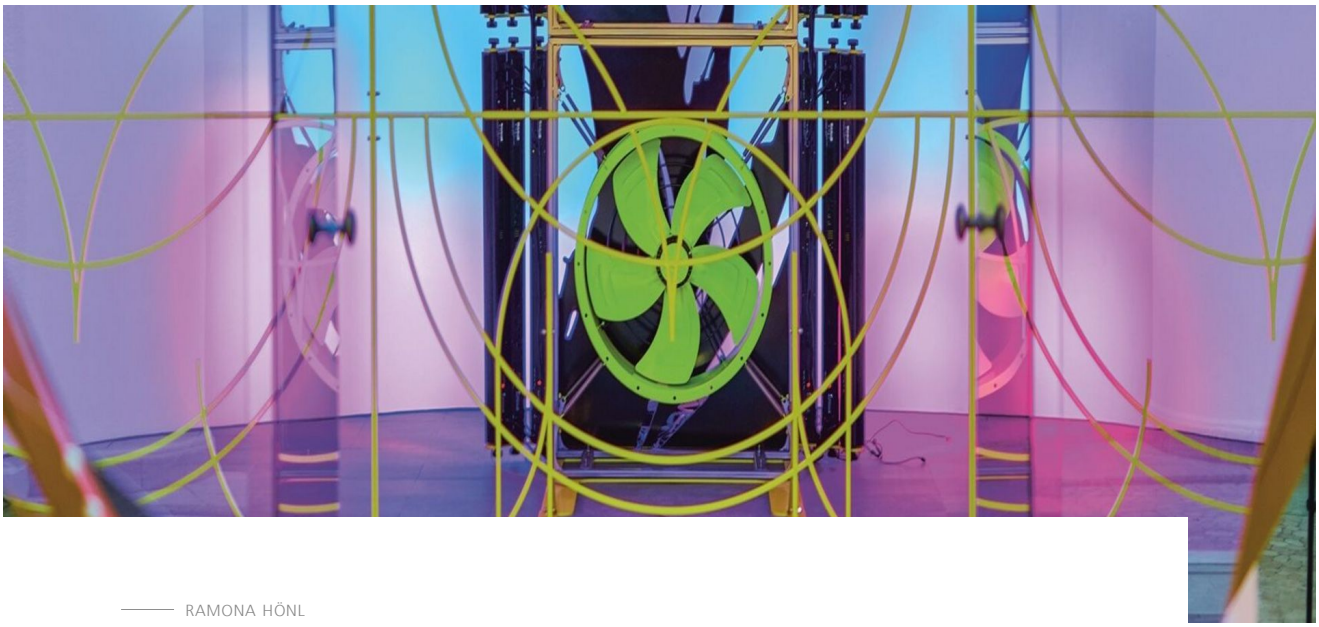


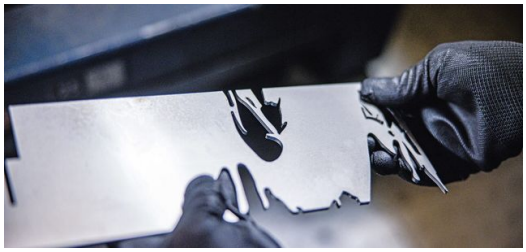
RAMONA HÖNL

Sheet metal art from Budapest: precision laser cutting

In southern Budapest, the small family-owned company Intertechnika welds, lasers and bends bespoke products for artists across Hungary. Teams of designers, machinists and artists craft unique pieces that draw international attention at exhibitions – while also gaining valuable experience for series production.

Lasers create art – In front of a silhouette of a forest crafted from laser-cut sheet metal, vibrant shapes move to the rhythm of meditative sounds, lit by thousands of LEDs. The wall projections pulse in harmony with the music to create an atmospheric blend of singing bowls, double bass and the resonant tone of a gong. Techno meets Zen. Hungarian artist Márton Nemes spent two years planning and creating his exhibition "Techno Zen." In the summer of 2024, it became the centrepiece of the Hungarian pavilion at the Venice Biennale, the world's largest contemporary art exhibition. A small Hungarian family business, Intertechnika, made it all possible – cutting and bending many of the abstract forms using TRUMPF technology.

Peter Alasztics (centre) and his brother Márton are the second generation of the family business. In 1991, their parents, Jullianna Alaszticsn. Kov.cs and Béla Alasztics, founded Intertechnika. They were introduced to TRUMPF in the early 2000s. In 2002, they purchased their first machine, a TruMatic L 4030. From that point, there was no stopping them.



Special pieces: Intertechnika learns from custom orders and applies this knowledge to series production.

Vision: Peter Alasztics introduces art into the family business and seeks a common language between artists and engineers.

From heavy industry stronghold to artistic hub

The majority of these murals and sculptures are being created in Budapest's Csepel district, located on a Danube island in the city's south. Once a stronghold of heavy industry, the area was home to manufacturers of motorcycles, cars and commercial vehicles from 1892 to 1993. Today, one of its heritage-listed industrial buildings is home to Intertechnika's headquarters. "We are a small contract manufacturing company," explains Peter Alasztics. "Each year, we process some 28,000 drawings and use them to manufacture everything from transformer parts to housings for Siemens."

But that's not all – over the past two decades, the company's 64 employees have become specialists in bespoke products made using lasers and bending machines. Their TRUMPF machines cut, bend and form sheet metal for artists across Hungary, with the design team constantly pushing the boundaries of what is possible. "We really enjoy taking on complicated orders like these," says Peter Alasztics.

> **"We are a small contract manufacturing company. Each year, we process come 28,000 drawings and use them to manufacture everything from transformer parts to housings for Siemens."**
>
> Peter Alasztics, CEO of Intertechnika

Peter and his brother Márton are the second generation to run the family business. In 1991, their parents, Jullianna Alaszticsn. Kov.cs and Béla Alasztics, founded Intertechnika. The company's first year was shaped by the upheaval of the disintegrating Soviet Union. They started out building and servicing CNC machine tools, but just a few years after the company was founded, the role of this technology began to diminish. In 1999, they relocated to the heritage industrial area on the Donauinsel. In 2000, they acquired their first laser, a second-hand 1.5 kW laser cutting machine, and transitioned to sheet metal processing.

Intertechnika becomes top technology pioneer in Hungary

"Laser technology and sheet metal processing were still relatively new in Hungary at that time. It was an opportunity for us to get involved in a new technology from the very beginning," recounts father Béla Alasztics. To learn the ropes, they observed a machine tool manufacturer friend who was already working with lasers. In the early 2000s, they discovered TRUMPF, and in 2002, they acquired their first machine – a TruMatic L 4030. From that point on, there was no turning back. The company introduced cutting-edge technology, including the automated laser cutting machine.

"We were frequently the first company in Hungary to try out TRUMPF's innovative processes, and we always had plenty of support from TRUMPF while we were getting started with them," recalls Béla Alasztics. The historic nature of the production halls presented TRUMPF with challenges from the outset. Although Intertechnika is allowed to expand within the large Donauinsel facility, structural modifications are not permitted. "At the time, there was just a 20-centimetre gap between the roof and the laser cutting machine," explains Peter Alasztics, "but TRUMPF helped us to optimise the layout." The Ditzingen-based company continues to help with Intertechnika's development today. "The first TRUMPF laser opened up a wealth of options for us back then," he says.

Precision: When manufacturing pieces of art, the emphasis is not on speed, but on what is technically feasible.

Work on the machine: engineers, artists and production staff learn from each other and develop a common language.

In 2005, Peter Alasztics introduced art into the company, a move that met with concern from his parents, as his father admits. During his studies at the Visart Academy of Arts in Budapest, Alasztics met the artist István Ézsiás, now over 80 years old, who was interested in sheet metal production waste. As they began their collaboration, Alasztics began to think about how the family-run company's machines could be used to cut and bend works of art.

"Finding a common language between artists and engineers was a real challenge," recalls Béla Alasztics. "Artists are free in their thinking, unconcerned with the physical properties or limits of materials," his son Peter explains, "whereas engineers are entirely focused on these constraints." While his brother Márton studied business administration, Peter trained as graphic designer. His master's thesis at the Institute of Art at the Berlin University of the Arts was about collaboration between engineers and artists. Gradually, he and the Intertechnika design team learned about the needs and desires of the artists, and translated them into reality.

"Working with sheet metal and lasers has opened up entirely new realms for my imagination."

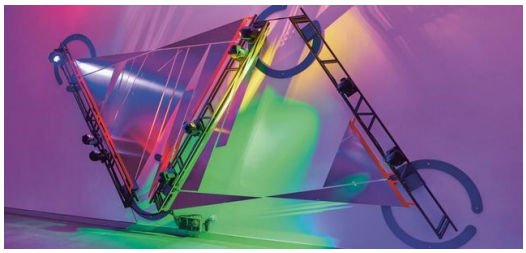
Márton Nemes, multimedia artist

Learning from artists

Márton Nemes has been working with Intertechnika since 2017. At the time, he was looking for someone who could cut a piece of sheet metal with a specially coating in rainbow colours. The material is so unique and costly that only Intertechnika had the courage to take on the challenge. "We had never seen material like it before – or since," says Peter Alasztics. The cut proved successful, and Nemes remains satisfied with the outcome, presenting these works in many of his solo exhibitions.

"I had no idea this kind of technology existed. It has completely changed my approach to sculpture," he says. Today, nearly all of his sculptures are created in close collaboration with Intertechnika. "Before I came across Intertechnika, I used completely different materials. Working with sheet metal and lasers has opened up entirely new realms for my imagination," explains Nemes.

Strange worlds: Intertechnika laser-cuts unusual silhouettes that artist Márton Nemes then assembles.



Inside Outside combines stainless steel, steel and light in a dynamic sculpture.

Techno Zen: Superposed and Entangled spans two walls.

The Superposed sculpture in the centre of the pavilion.

Now an institution in Hungary's art world, Intertechnika collaborates with the local art university, helping students to create their final projects each year. Peter Alasztics encourages his nine-person design team to push the boundaries. When using their machines to create unique pieces, they simultaneously learn techniques applicable to series production. For example, they have manufactured lamp housings for the iconic Széchenyi Chain Bridge over the Danube and tablet cases that are resistant to breaks, scratches and impacts for prison inmates – leveraging expertise gained from their art projects.

The two brothers' next move is to increase the degree of automation in their production. With TRUMPF's Oseon software at the ready, they are carrying on their parents' tradition of ongoing investment in cutting-edge technology and software. Oseon is designed to streamline the manufacture of their standard products, making it more efficient and cost-effective. This, in turn, allows for more focus on their art products and unique pieces. "Innovation requires a mindset that is always seeking to create something new," says Peter Alasztics. "When faced with something that is tricky to produce, we turn to works of art and find that it can actually be done!"

RAMONA HÖNL

SPOKESPERSON FOR MACHINE TOOLS