



QUANTUM LEAP IN STEEL CUTTING

XXXL laser cutting system for Europe Steel Center

Moerdijk, Netherlands, 2025.07.09

By investing in a customized ELEMENT L laser cutting system from Messer Cutting Systems, Europe Steel Center in Moerdijk, Netherlands, has taken its production processes to a new level. The project was implemented with the goal of combining innovation, efficiency, and sustainability. The core of the solution is an XXXL cutting system that not only meets the highest demands for precision and flexibility but also replaces two existing CO₂ lasers and a plasma cutting machine – with measurable ecological and economic added value.

The right moment for Innovation

"We've had fiber lasers on our radar for years," says Edward van Herpen, CEO of Europe Steel Center. "But we wanted to wait for the right moment - and that moment came in 2024."

The company, which specializes in large-format sheet metal, was specifically looking for a solution to modernize its production capacities and future-proof them. "It wasn't just about purchasing a new machine," adds Tony Oerlemans, the project's technical lead and QHSE & Continuous Improvement Manager. "We wanted to rethink cutting – more efficiently, more sustainably, and with the highest technical precision."

Size, Technology and Trust

After a comprehensive market comparison, the team chose Messer Cutting Systems. The requirements were demanding: cutting bevels on sheets up to 40 mm thick, flexibility in material sizes, and fully automated integration into the internal material flow.



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"We compared all the major suppliers worldwide – but Messer impressed us the most," emphasizes Oerlemans. The decision to choose Messer Cutting Systems wasn't a coincidence – it was the result of a clear list of requirements, which the supplier met precisely. "What convinced us was the complete package," says Tony Oerlemans. "We didn't need a standard solution, but a machine that precisely matched our requirements."

Several factors were decisive: the machine's exceptionally large processing area (16 meters x 3.5 meters), its high laser power for thick sheets, its state-of-the-art technical equipment with numerous options, its intuitive operation – and, last but not least, the reliable on-site service. "Messer's good reputation in the industry also played an important role," adds Oerlemans. "Here, we knew: This would work."

The ELEMENT L – Productivity redefined

The ELEMENT L is the flagship fiber laser cutting system from Messer Cutting Systems – specially developed for XXL sheet metal, maximum cutting quality, and the highest energy efficiency. Available with fiber laser sources in various power levels, the system offers an outstanding balance of speed, precision, and reliability – even with high material thicknesses. Thanks to its modular machine design, the ELEMENT L can be optimally adapted to specific requirements. The Bevel-U bevel unit enables the production of precise bevel cuts at continuously adjustable angles and with the tightest tolerances, which is particularly important for weld seam preparation. In addition, the separately driven needle marking system enables permanent marking of components in seconds.

The solution at Europe Steel Center includes automated, interchangeable cutting tables and integration into two halls for separate loading and unloading processes. The robust machine frame on precision linear guides, state-of-the-art CNC control with Global Connect, and an automatic nozzle inspection and change system (LNC) make the ELEMENT L a future-proof investment, enabling minimally manned operation. The use of the on-board LNC unit eliminates long travel distances for nozzle changes, which also contributes to a significant increase in process efficiency.

"The ELEMENT L fits our customer's vision perfectly," explains Bas Sanders van Well, Business Unit Manager Benelux at Messer Cutting Systems. "It represents dynamism, scalability, and precision – exactly what Europe Steel Center needs for its next step in growth."





Precision in large format

Under the project name "XXXL Laser Cutting Line," preparation of the production area began in mid-2024. The new system went into operation in March 2025. The ELEMENT L was integrated into the material flow in such a way that loading and unloading can now take place separately in two production halls. "This is a real game changer for us," says van Herpen. "We were able to eliminate bottlenecks in the crane systems – this saves time, reduces waiting times, and increases occupational safety."

The new solution is also a step forward in terms of energy efficiency: "The new laser machine replaces two CO₂ lasers and a plasma cutting system – this not only saves energy but also a lot of wear parts," emphasizes Oerlemans. "And our operators are also pleased that they only have to operate one control system."

Partnership on equal terms

Both sides experienced the collaboration with Messer Cutting Systems as a highly cooperative partnership. "It was truly a collaboration between equals," describes Edward van Herpen. "Very professional people who truly understood our requirements." The implementation ran smoothly – from laying the foundations to track construction and commissioning.

Innovation leads to success

Messer Cutting Systems is also proud of the project: "Europe Steel Center is a perfect partner for our ELEMENT L – it combines large-format requirements, a high level of quality awareness, and a passion for innovation," says Bas Sanders an Well, Business Unit Manager Benelux at Messer Cutting Systems. "It was clear to us that we needed to deliver not just a machine, but a solution with a lasting impact. The fact that we were able to achieve such far-reaching improvements together is a highlight for us as well."

More is possible

Europe Steel Center and Messer are currently jointly exploring further solutions for the future. "We've been impressed by the collaboration. Now we're looking at the next steps," reveals Oerlemans. These ideas are still in their early stages – but the foundation for further growth has been laid.



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Image 1: With cutting, changing and loading table, the ELEMENT L reaches a length of 60 meters.

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Image 2: The ELEMENT L is equipped with a needle marker and bevel cutting head Bevel-U.

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Image 3: State-of-the-art CNC control with Global Connect and video surveillance.

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Image 4: Small pieces and slag are carried out of the table by vibrating chutes. The material is automatically transported to a central scrap container via the transverse conveying system, fixed beneath the vibration chutes.

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Image 5: Sandra de Kok (Chief Operating Officer & Chief Financial Officer Europe Steel Center).
Edward van Herpen (Chief Executive Officer Europe Steel Center) and Bas Sanders van Well
(Business Unit Manager Benelux, Messer Cutting Systems) from left.

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WHAT WE STAND FOR

CREATING SOLUTIONS BEYOND MACHINES

Messer Cutting Systems is a global provider of cutting-edge technology for the metalworking industry. With almost 1.000 employees worldwide in over 50 countries, we are in constant dialogue with our customers to create sustainable, user-oriented innovations.

Our portfolio encompasses the areas of PRODUCT, DIGITAL, SERVICES, AUTOMATION, and KNOW-HOW. We live up to our claim of "Creating Solutions Beyond Machines" not only with state-of-the-art cutting systems and solutions for oxyfuel technology.

Suitable services and training, our own software applications, and the integration of solutions from our technology partners, e.g., in the field of automation, complete the machine to create future-oriented, complete solutions.

Our expertise, combined with our customer-focused approach and actions, makes us the partner of choice worldwide for innovative, complete solutions for cutting systems. For more than 125 years.

STRONG IN STEEL SOLUTIONS

Europe Steel Center is a leading provider of customized structural steel solutions based in Moerdijk, the Netherlands. Founded in 1990, the company consists of three strong business units: Kröger Staal BV (steel trading), BV Snijwerk (cutting work), and Europe Steel Projects B.V. (steel construction projects). The site covers 50,000 m², has its own quay for water logistics, and stores approximately 40,000 tons of heavy plates.

Europe Steel Center specializes in large-format plates with lengths up to 16 meters and widths up to 3,750 mm – almost all grades are available directly from stock. The focus is on high-quality, 3.2-certified steels from Europe. The company employs 70 people and generates annual sales of approximately €60 million. Under the motto "Strong in Steel Solutions," Europe Steel Center stands for quality, independence, and innovation.

