

# Cutting lifted to a new level

The Liebherr group of companies have invested in a new cutting plant, with two new ZINSER 4025s for their production site in Biberach, enabling processing of plates up to 300 mm thick. The exceptional technology was not the only reason for Liebherr to invest in the new cutting machines from ZINSER. Finding a long-term, strategic partner for the realization of various cutting projects was an equally important factor.

Since 1954, Liebherr-Werk Biberach GmbH, which currently employs 1,600 people, has produced custom-made tower cranes for national and international sale. The Liebherr group is also the controlling company for further crane production sites in Spain and India. A main goal of the Liebherr project team, alongside



purchasing the new cutting plant with an ideal price-performance ratio, was finding the right company to establish a long-term, strategic partnership with, for all ongoing and future flame cutting challenges and projects. "Before making this investment, which is

very important for us, we very closely examined the solutions that are currently available on the market. In the end, ZINSER convinced us with the remarkable performance of their cutting systems and the accompanying whole package", explains Liebherr's project leader Jens Pralow.

In May 2019, ZINSER was awarded the contract for realizing this demanding project – a clear expression of trust from Liebherr.



The innovative 5 axis system allows plasma bevel cuts up to 50°, as well as a better cutting accuracy and quality than ever before.

ZINSER's CEO Andreas Niklaus emphasizes: "Be-

fore closing this deal, we conducted many in-depth discussions and various practical demonstrations. Liebherr is a very interesting and pleasant business partner for us. We are convinced, that this project is just the beginning of a close, world wide partnership with the Liebherr group.”

A joint, inter-divisional Liebherr-ZINSER project team developed the technical and commercial solutions fulfilling all mandatory specifications. The main technical features are: two independent, identical but mirrored ZINSER 4025 cutting machines, each equipped with a plasma bevel unit for bevel cuts as well as a plasma torch for straight cuts for plate thicknesses up to 45 mm. Each one of the four plasma torches is powered by its own individual XPR 300 plasma source with gas console VWI from Hypertherm. Automatic arc height control ZAC 5070 and cameras with separate LCD screens for process control purposes increase the cutting quality and make the machines extremely easy to operate. Two additional oxy-fuel torches with Acetylene cutting gas and electric height adjustments with a stroke of 300 mm allow the cutting of plates with thicknesses up to 300 mm. Both machines run on joint tracks with a length of 41 meters.



Convincing cutting quality



A further important factor in favor of ZINSER was the easy-to-understand programming processes within the ZINSER cutting software. Both machines are operated via a modern ZINSER 5010 controller

with comfortable 22" TFT color screens and a 64 Bit Windows 10 version. Traditionally, ZINSER believes in its own, in-house developed operating software and thereby guarantees an ideal interaction of mechanical parts, electric components and the control software of the machine.

In order to maximize the operating hours of the machines and keep the cleaning and set-up times as short as possible, both machines operate above a self-cleaning ZINtrac



The two new ZINSER 4025, each equipped with a plasma bevel unit and a straight plasma torch and two oxy-fuel torches, run on joint 41 m long tracks.

“With the 5 axis technology, we now own state-of-the-art technology”, adds Lorenz Lamparter, head of Liebherr’s cutting division.

The two plasma bevel units allow precision plasma bevel cuts up to 50°, which was one of the most important technical requirements. Thanks to the True Bevel technology, the first bevel cut already comes very close to the final result. “The 50° bevel technology results in a significant reduction of cost and throughput time”, explains Lamparter.

oscillating conveyor table, each providing an actual working area of 3,000 x 15,000 mm. The two oscillating conveyor tables automatically transport slag and other cutting waste below the hall floor level to the ejection areas of the tables, which face each other in between the two cutting machines. There, the scrap is ejected to the side of the tables and transported directly into a mobile waste container which can be emptied regularly. This process allows a significant reduction in time and maintenance and thereby considerably increases the productivity.



A modern ZINSER system for automated scrap removal, consisting of two ZINtrac oscillating conveyor tables combined with an automated waste ejection and collection system, make the whole installation a state-of-the-art solution for flame cutting for the Liebherr-Werk Biberach GmbH.

„During the entire project, everything simply fit between ZINSER and ourselves”, adds Liebherr’s project leader. “Throughout the whole planning and implementation phases, the cooperation with ZINSER was excellent. No matter which cutting tasks, the whole ZINSER team supported us with its combined expert knowledge every step of the way – from test cuts upfront to the initial production assistance after the machine installation at out site.”



Happy faces all around after the final machine acceptance test at Liebherr. Management, project team and operators worked hand in hand to reach this moment.

The good news regarding the overall satisfaction of Liebherr-Werk Biberach GmbH with the ZINSER solution has already spread to other divisions in the company and has led to the first follow-up order. The commissioning of the machine from this second order has been effected in August 2021.

**CUTTING  
WELDING**

SINCE 1898



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