

Success Story

LiCON: Technologically demanding project for electric vehicle manufacturer successfully completed in record time

The machine gets wings for our customers

Our solutions are used worldwide and the i³ technology enjoys great popularity due to its maximum accuracy and maximum efficiency thanks to two spindles, especially in the drivetrains of leading electric vehicle manufacturers. The ambitious development times of our customers hardly allow for sea freight, which is why our team was able to accompany this exciting process of loading a 25-ton LiCON LiFLEX II 766i³ twin-spindle vehicle. An uplifting feeling!

Even before the outbreak of the coronavirus pandemic, a young American car manufacturer was about to start production. The scheduled start of production was of great importance in order not to jeopardize the planned IPO. For various reasons, the American company had unforeseen problems producing the high-precision housings for its electric drives. After brief and intensive project work, it was able to agree on a very ambitious schedule with LiCON, a German manufacturer of modular single and multi-column CNC machining centers.

However, the coronavirus pandemic created further hurdles that made the schedule even more challenging. For this reason, production was started and 5,000 parts were manufactured at the LiCON site in Laupheim in southern Germany. All components were transported by air freight from the USA to Germany to be processed directly at LiCON. These components of an electric vehicle are the parts that require the highest accuracy and precision. An electric drive delivers around 200 hp. Up to four of these drives are installed in an electric SUV from the American car manufacturer. This gives a vehicle a considerable output of up to 800 hp. In these very quiet vehicles, inaccuracies in the components would inevitably cause significantly increased driving noise.

Thanks to i³ technology, we achieve double-spindle machining in a single clamping operation:

- Positioning accuracy better than one hundredth of a millimeter
- Turnover accuracy better than two hundredths of a millimeter and that from the very first component!

And all this with an optimum cycle time.

During this production phase, the motor was also installed in Germany by a renowned major corporation, so that the e-drives then arrived back in the USA by air freight for the final assembly of the vehicles in accordance with the production plans.

In order not to disrupt the production flow after the start of production, it was necessary to relocate the LiCON machining centers from Germany to the USA in the shortest possible time. The usual transportation route by ship across the sea would have taken more than five weeks. This was not feasible in the context of the production plans with the necessary call-offs. To avoid such a loss of time, the five machines were transported using the largest cargo aircraft in the world. Each LiCON machining center weighed 25 tons and took off for the USA in an Antonov. This meant that production in the USA could be resumed immediately within just two weeks of the end of production in Germany. The production plans were thus secured.

What was achieved:

- Order in January
- First chips in March
- Pre-series production by the beginning of May
- Delivery and start of production at the customer in the USA in mid-May

In conclusion, a great collaboration and project implementation in record time.

About LiCON

LiCON mt GmbH & Co. KG, a global system supplier of modular machining centers stands for high-precision machining in series production. Core products are horizontal machining centers, with single-spindle, twin-spindle and even four-spindles. Unique is the portfolio of loading options. LiCON offers all three options, direct loading, double trunnion and pallet changer. Most of its customers from the automotive and other industries, appreciate the technology expertise and select a turnkey solution including the machining process. LiCON is dedicated to keep the quality of the machine and the machining process under control. That is why LiCON develops, designs and builds fixtures, motor spindles and most of its machine components inhouse.

Additionally, system integration with customized adaptable automation concepts.

With 210 employees in Europe, US, and China, LiCON is perfectly sized to lead in technology and be a flexible partner to its customers worldwide.

More information: www.licon.com

Images



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Millimeter work: The LiCON machine weighing around 25 tons is loaded into an Antonov.



2023-07-Antonow-2

Other components of the LiCON machine were safely packed in wooden crates.

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