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A South Tyrolean company chooses Swabian ultrasonic deburring technology

Laupheim, Germany, 24th October 2024 – Intercable Tools GmbH has been firmly rooted in Bruneck in the Italian province of South Tyrol since it was founded in 1972. Since then, the family-owned company has succeeded in gaining a significant position on the international market and is now one of the leading manufacturers of connection technology and tools for professionals and industry. Since May 2024, Intercable Tools has been using ultrasonic deburring technology from Swabian company ultraTEC innovation GmbH to remove burrs from hydraulic units automatically and in a contact-free manner.

Together with Intercable Tec, a developer and manufacturer of automotive components, Intercable Tools forms a management-led family business with branches worldwide and over 600 employees around the globe. For some time, Intercable Tools had been looking for an automated solution to the previous method of manually deburring hydraulic units of battery-powered hydraulic cutting tools made of aluminium and steel. Such hydraulic units are used, among other things, in hydraulic battery-powered perforators, which the company develops, manufactures and distributes. These sheet metal punches are suitable for punching round, square and rectangular holes up to 3 mm thick. The complex task for the ultraTEC ultrasonic deburring technology was not only to remove all detachable burrs from the inside and outside of the components, but also to automatically cut off any irritating chip clusters at the bore intersections.

"We were looking for an innovative alternative to manual deburring. It's also important for us to produce our variants without set-up time," said Heinz Pramstaller, Team Leader of Metal Production at Intercable Tools. "The deburring process should also be optimally integrated into the process and, for example, the components should be cleaned in the same product carrier in the parts cleaning system."

The new ultraTEC A25 S system automates the manual process

The companies first came into contact with each other at the DeburringEXPO trade fair in Karlsruhe, Germany, in October 2023. Heinz Pramstaller had brought along the component to be deburred and so an initial deburring test was carried out on the trade show machine. The component was manually guided to the sonotrode, with a positive result. The advantages of this method over the previous manual deburring process quickly became apparent to Intercable Tools. Ultrasonic deburring means that the results always remain the same, there is no damage to the drill holes and uncontrolled material removal is generally avoided. It also guarantees that no holes are forgotten, which can happen with manual deburring. The ultrasonic deburring process also has the advantage that cross bores can be deburred and rinsed out at

the same time. The initial tests for Intercable Tools were therefore very promising.

Patented ultrasonic deburring

Non-contact ultrasonic deburring with the patented sonotrode forms the foundation of the ultraTEC technology. Components to be deburred are guided in a process water basin along the tip of an ultrasonic sonotrode, whose generated vibrations cause the burrs and chamfers to break off in an automated and energy-efficient manner.

Stimulated by a generator, the sonotrode oscillates back and forth 20,000 times per second over 0.1 millimetres. These generated vibrations move burrs and chamfers back and forth until they are broken off with sharp edges in a process-safe manner. Similarly, ultrasonic deburring does not apply any temperature to sensitive components, which can lead to deformation and discolouration. In addition to deburring common metals, ultraTEC systems can also be used with components made from various titanium and nickel alloys, as well as fibre-reinforced plastics.

From the deburring tests in Laupheim to commissioning in South Tyrol

At ultraTEC's premises in Laupheim, numerous automated deburring tests were carried out with components from Intercable Tools. Detailed documentation was provided for each test so that the specialists from Intercable Tools could assess each one accordingly. Regular coordination meetings and a visit from the South Tyroleans in Laupheim led to them placing an order for the A25 S ultrasonic deburring system in late March 2024. Two months later, the A25 S was showcased for the first time as an innovation at the GrindingHub trade fair in Stuttgart, Germany, before preliminary acceptance was already carried out at ultraTEC in mid-June 2024. Four weeks later, the A25 S was put into operation at Intercable Tools in Bruneck in South Tyrol.

"We're delighted that we were able to implement the project in such a short time and that Intercable Tools chose ultraTEC to automate the deburring process," says Thomas Benzing, Sales Manager at ultraTEC innovation GmbH. "It's very important to us to maintain a sense of partnership and trust when working with our customers."

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Press images



Caption: Commissioning the A25 S ultrasonic deburring system at Intercable Tools with Fabian Sendelbach (standing on the right) (service employee at ultraTEC) and Markus Hochgruber (left) and Lukas Huber from Intercable Tools.



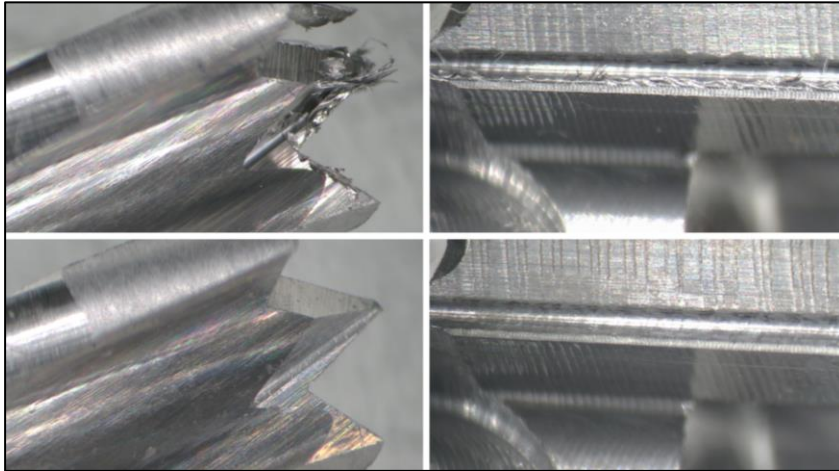
Caption: Product carriers with hydraulic blocks that Intercable Tools will be able to deburr automatically in future using ultrasonic deburring technology from ultraTEC innovation.



Caption: The process of ultrasonic deburring of the hydraulic blocks uses ultraTEC technology with an ultrasonic sonotrode, whose generated vibrations remove burrs and chamfers in an energy-efficient manner.



Caption: The A25 S ultrasonic deburring system from ultraTEC innovation can be used to remove burrs and chamfers from machined components.



Caption: The "before and after" images show how the ultrasonic deburring technology from ultraTEC innovation achieves optimal results during selective deburring without additional material removal at the cutting edge.

You can find further information at:

www.ultratec-anlagen.de/en/contact/press

Video – ultraTEC – Deburring in 100 seconds:

<https://www.youtube.com/watch?v=7NI8zhg0Etk>

You can also visit us on LinkedIn:

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