JENNIFER LIEB

Everything under control: laser keeps tool markings legible for years

Anyone reaching for a screwdriver in their toolbox should be able to tell straightaway whether they have the right size in their hand. With PB Swiss Tools products, this is now possible even after years of use - thanks to laser marking with a TRUMPF marking laser.

Marco Baumann, CEO of PB Swiss Tools, proudly examines a freshly marked screwdriver from the latest product range. The logo and marking adorn the tool handle in razor-sharp precision. For Baumann, who is the fifth generation to run the family business, it is more than just a visual detail - it is another step toward the goal that his great-grandfather Paul Baumann pursued over 100 years ago in the heart of the Swiss Emmental: to use innovative techniques to manufacture tools that will last for years.

The right tool at first glance

For PB Swiss Tools, tool marking is of great importance. "It's part of our products' image, and not just because of the company logo. It helps users recognize the right screwdriver straightaway," explains Adrian Kernen, Engineering Project Manager at PB Swiss Tools. To achieve this, PB Swiss Tools colors the end caps of the handles differently for each type of tool. The marking emphasizes this effect: a symbol for the respective screw profile allows the user to quickly identify the Phillips, Torx or hexagon socket. "Until now, we used a printing process to mark the screwdrivers. This is very time-consuming and the print gradually rubs off with use. There is also the issue of occupational safety, as our employees had to work with solvents up to now," says Kernen. To ensure that the marking is of the same high quality as the tools themselves, a new process was needed.

To ensure you can quickly find the right tool, the laser marks the end caps of the tools with the symbol of the respective screw profile.

Adrian Kernen checks the quality of the finished tools: with the laser, the marking on the handles is just as high quality as the tools themselves.

Thanks to the marking laser, employees no longer have to label the handles by hand.

It lasts longer with the laser

The company opted for laser marking. "If we no longer apply color for the marking, it also won't wear off over time. Laser marking is therefore much more durable, and we save on drying time," explains Kernen. However, PB Swiss Tools does not use just any marking system. "We have been working with TRUMPF for some time now and have always received excellent advice and support. It was clear to us that we would rely on TRUMPF for our marking too," says Marco Baumann.

After several tests, the TruMark 3330 UV laser proved to be the best choice. To ensure perfect legibility, PB Swiss Tools marks its plastic handles in black or white, depending on the color tone. To do this, they precisely adjust the laser parameters to the handle material. "Due to its UV wavelength, the marking laser is ideal for marking polymers, and thanks to its high pulse energies, it is highly productive," says Kernen. This doesn't just work for practical standard marking: "We are very flexible with the designs and can implement individual customer requests without much effort," explains Kernen.

"Thanks to TRUMPF, we deliver quality that our customers can literally feel, even years later."

Marco Baumann, CEO of PB Swiss Tools

Productive through automation

PB Swiss Tools uses a fully automated system to assemble over 200 different screwdrivers. A big step for the company: "Up to now, our employees manually assembled the tool blades with the handles and then printed them by hand. The new system allows us to combine the two production steps, as we were able to integrate the marking laser very easily," says Baumann. This saves the company a lot of time, as Kernen explains: "The system has a cycle time of five seconds. This means that a screwdriver is assembled and marked every five seconds. This significantly increases our productivity."

For perfect legibility, the laser marks the handles in black or white, depending on the color tone.

Thanks to the integration of the marking system into an automated assembly line, a screwdriver is fully assembled and marked every five seconds.

PB Swiss Tools marks over 200 different screwdrivers with the TRUMPF TruMark 3330 marking system.

Development continues

Baumann is hopeful about the future: “Ideally, we would like to mark all our products with lasers.” He has already put his words into action and purchased another TRUMPF marking system. PB Swiss Tools is using the TruMark Station 5000 and a TruMark 3330 marking laser to test small series in order to gradually produce more products with the fully automated system with integrated marking system. Efficiently and in the best quality, of course, because: "We are proud that we can continue the family tradition and, thanks to TRUMPF, deliver quality that our customers can literally feel, even years later," says Baumann.

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