JENNIFER LIEB

Getting a handle on things: long-lasting legibility of tool markings thanks to laser technology

When you reach for a screwdriver in your toolbox, you want to know instantly that you have picked up the right size of tool. 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 with 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 towards the goal that his great-grandfather Paul Baumann pursued over 100 years ago in the heart of the Swiss Emmental region – to use innovative technologies to manufacture tools that will last for years.

The right tool at first glance

PB Swiss Tools attaches great importance to its tool markings. "Not only does it feature on our products as part of the company logo, it also helps users identify the right screwdriver at a glance," explains Adrian Kernen, Project Manager for Engineering at PB Swiss Tools. For this purpose, PB Swiss Tools uses a different colour of end cap on the handles of each tool type. The marking emphasises the effect, as a symbol for the respective screw profile allows the worker to quickly identify Phillips, Torx or hexagon key sockets. "Until now, we have used a printing process to mark screwdrivers. This is very time-consuming and the print gradually rubs off with use. Added to this is the issue of occupational safety, as our employees had to work with solvents," says Kernen. To ensure that the markings are of the same high quality as the tools themselves, a new process was required.

To ensure that the right tool is quickly to hand, the laser marks the end caps of the tools with the symbol showing 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.

The marking laser means employees no longer have to label the handles manually.

Laser markings last longer

The company opted for marking lasers. "If we no longer use paint for markings, they won't erode over time. Laser marking is much more durable and doesn't require any drying time, "explains Kernen. However, PB Swiss Tools does not use any old laser marking system for this purpose. "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 also rely on TRUMPF for our markings," says Marco Baumann.

After a few tests, the TruMark 3330 UV laser proved to be the best option. To ensure perfect legibility, PB Swiss Tools marks its plastic handles in black or white, depending on the colour of handle. To achieve this, they adjust the laser parameters precisely to the handle material. "Due to its UV wavelength, the marking laser is ideal for labelling polymers, and thanks to its high pulse energies, it is highly productive," explains Kernen. This not only works for standard practical markings: "We are very flexible with the designs and can implement individual customer requests without much effort," says Kernen.

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

Marco Baumann, CEO of PB Swiss Tools

Productivity through automation

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

To ensure perfect legibility, the laser marks the handles in black or white, depending on the colour of handle.

The integration of the laser marking system into an automated assembly line means that one screwdriver is fully assembled and marked every five seconds.

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

Ongoing development

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 laser marking system. PB Swiss Tools is testing small series with the TruMark Station 5000 and a TruMark 3330 marking laser in order to gradually produce more products with the fully automated system with an integrated laser marking system. Efficiently and to the highest quality, of course. "We are proud to be able to 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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