



## PRESSEMITTEILUNG

powRgrip system at Zimmermann – More precision for the future of flexible production

Flexibility is the recipe for success at Zimmermann GmbH. This applies to employing staff as well as to production. Agile production requires appliances that can keep up with this flexibility. Zimmermann decided on the Rego-Fix powRgrip system from Switzerland, which is perfectly suited to support them.

In addition to a great deal of technical know-how, Zimmermann also has the most modern equipment. After removing the micro section (micro milling cutters with a diameter of less than one millimetre), the contract manufacturer was no longer able to achieve the required quality and precision with the clamping systems that were used at that time. This is because handling these diameters requires a system that is designed especially for this. Zimmermann therefore purchased the tool clamping system from Rego-Fix: "We have been using the powRgrip system successfully for three years. As part of a benchmark during the procurement process, the system quickly became our preferred solution right from the first comparisons in our production department", reminisces Thorsten Vogel-pohl, who is responsible for tool management at Zimmermann. "powRgrip convinced us, as it is very easy, quick and flexible to use. It was immediately clear to us that we will use the powRgrip system on all of our production machines in the future."

powRgrip works as follows: The collet is clamped up to the stop in the tool holder using the automatic powRgrip clamping unit; all of this is done without heating and with hydraulic pressure of up to nine tonnes. This extends the holder, and the high clamping force is created by the material elasticity. When clamping, the tool is inserted in the collet and this is inserted into the tool holder. The holder is inserted into the powRgrip clamping unit, it's started and ready to go!

The contract manufacturer's main challenge is always precision in the applications. This applies particularly to the chip industry, where only minute production tolerances in the nano range are permitted. In the micro milling process, the powRgrip tool clamping system has a significant effect on the precision at the tip of the clamping tool's cutting edge. There really isn't much room for tolerance in micro production. Zimmermann's priority in micro production is on precision and less on the tool life, as there is no series production here. However, the powRgrip system's vibration dampening property is even noticeable when drilling small quantities of carbide and solid metal.

The Rego-Fix system has proven successful across the board at Zimmermann. The powRgrip system ensures that the tools wear gently and evenly. The employee can therefore judge precisely when the critical wear point of less than two tenths of a millimetre is reached. In numbers: The same milling cutter could previously only be used for three parts and now it can be used for ten. Regrinding due to wear on one side was previously not possible and now regrinding can be carried out up to six times without problems. In other test systems, the wear for the two factors of wear depth and length of tool life were different and had to be monitored far more closely. This took up much of the craftsman's time, which is unproductive. Furthermore, the fact that tools have to be replaced when worn must also be considered even if regrinding would still be possible. Once this point has passed, the tool can only be disposed of. Thanks to powRgrip wearing the cutting edge evenly, the regrinding process can be carried out up to six times without problems. In contrast, the wear on the edge was previously so severe that regrinding was extremely difficult or not even possible any more.

Summary: powRgrip is the preferred option in the entire Zimmermann company. The system's flexibility meets the company's requirements and philosophy completely. The employees are also very satisfied with powRgrip's simplicity and handling. This is particularly true in the production department where tool changes are carried out several times per day on each machine. "powRgrip is a very simple and precise system on which you can really rely. The repetitive accuracy is high and the tools always run reliably and evenly", says Thorsten Vogelwohl in a nutshell. "It's such a relief when you can say that tool clamping just never causes any problems and can be considered a settled matter for the craftsman working on the machine. However, above all, powRgrip is the chosen future system for increasing precision in our manufacturing department."

*Zimmermann GmbH is based in Wetter in the south-east of the Ruhr region of Germany and covers all customer requirements for machining. Since its founding in 1986, the company has grown continuously, particularly over the last ten years: From three employees and three machines, the company now employs 24 people and has 15 machines. Zimmermann is a reliable and capable supplier, as well as a system supplier for the optics, laser, electronics, medicine and chip industries, as well as the aviation and aerospace industries. The company from North Rhine Westphalia is not a contract manufacturer in the truest sense. By specialising in prototypes and small series, only 5 – 10 components per year are manufactured from one product. As a single-unit producer, Zimmermann can offer extremely high flexibility to the various industries and meet the widest range of customer requirements.*

[www.feinmechanik-zimmermann.de](http://www.feinmechanik-zimmermann.de)



powRgrip system: A unique tool clamping system that clamps tools in seconds at the touch of a button and without heating, and that also has a sustainably precise concentricity even for the smallest tool diameters.



Low-stress aluminium (closeup with micro tool). Machining tool with 0.15 mm diameter.



Comparison of wear on tool blade, machining, material – left: with powRgrip, right: without powRgrip.