

/ PRESS RELEASE // JULY 2023

VOLLMER penetrates the microcosm of tool manufacturing

Biberach an der Riss, 31st July 2023 – Microtools are drills and milling cutters with diameters below 0.5 millimetres. Swabian sharpening specialist VOLLMER has succeeded in eroding such delicate PCD tools highly precisely and cost-efficiently with its VHybrid 260 grinding and erosion machine.

(The press release and accompanying images can be found at the following link:
<https://www.vollmer-group.com/en-uk/company/press/press-releases.html>)

Progress in areas such as medical implants and wearables means that electronic components are becoming increasingly fine and delicate. For this reason, smaller and smaller tools are being used in manufacturing processes in the medical technology and electronics industries. PCD microtools with diameters of 0.45 millimetres and below are in particular demand for the production of microchips.

It's the generator that makes the difference

Biberach-based sharpening specialist VOLLMER has recently penetrated this microcosm of tool manufacturing with its VHybrid 260 grinding and erosion machine. Thanks to the Vpulse EDM generator, the smallest microtools with diameters of 0.45 millimetres and below can be produced with the highest precision, performance and surface finish. The innovative generator technology achieves a surface finish of up to 0.05 µm/Ra (micrometre/average roughness value) when eroding, which corresponds to an average roughness of up to 0.24 µm/Rz. In addition, it is possible to produce a cutting edge radius of up to 1.5 µm with the VHybrid 260. This eliminates the need for subsequent grinding or polishing of functional areas of the tool. This spares additional work steps, which usually involve demanding process control, and thus also reduces the overall production costs.

Innovative functions combined with proven technology

To ensure optimum concentricity of maximum 2 µm when machining microtools, the VHybrid 260 is equipped with an insulated tool steady rest, which also allows it to be used for eroding. Furthermore, due to the "Laser Check" integrated measuring system, required tolerances of ± 2 µm can be achieved during fully automatic circular machining in a closed-loop process.

One of the reasons why the VHybrid 260 is able to sharpen so precisely is the VOLLMER machine's innovative and robust kinematics. Tool manufacturers can use the VHybrid 260 to grind or erode both carbide and PCD tools up to 100 percent in one set-up. The sharpening machine is based on multi-layer machining, which is implemented through two vertically configured spindles. The lower spindle can be used both for grinding and for eroding. Moreover, up to eight grinding and eroding wheels, including coolant supply, can be switched fully automatically. Various automation options also enable unmanned operation around the clock.

"At EMO 2023 in Hanover, we will be demonstrating how suitable the VHybrid 260 is for high-precision machining of PCD microtools at our stand," says Jürgen Hauger, CEO of the VOLLMER Group. "With the optimisation of the VHybrid 260, we enable tool manufacturers to produce their PCD microtools without post-machining – around the clock and via unmanned operation."

(approx. 3500 characters)

Press images



Caption: The size comparison with a matchstick shows how the VOLLMER VHybrid 260 with its expanded functions can machine different PCD microtools with high precision.

About the VOLLMER Group

With its comprehensive range of machinery, the VOLLMER Group – which has sites in Germany, Austria, Great Britain, France, Italy, Poland, Spain, Sweden, the USA, Brazil, Japan, China, South Korea, India, Russia and Thailand/Taiwan – enjoys global success as a tool machining specialist in the areas of both production and service. The technological leader's range of products includes the most advanced grinding, eroding, laser and machining tools for rotary tools and circular saws in the woodworking and metalworking industries, as well as for metal-cutting band saws. VOLLMER relies heavily on the traditions and strengths of the company – close cooperation channels, quick decisions and the fast responses of a family-run business. The VOLLMER Group currently employs approximately 800 workers worldwide, with around 580 of these at the main headquarters in Biberach alone, including more than 75 trainees. The company invests around eight to ten per cent of its turnover in the research and development of new technologies and products. As a provider of technology and services, the VOLLMER Group is a reliable partner to its customers.

Further information and relevant images are available at:

<https://www.vollmer-group.com/en-uk/company/press/press-releases.html>

Find us on LinkedIn and Facebook:

www.linkedin.com/company/vollmer-werke

www.facebook.com/vollmergroup

Contacts for journalists

VOLLMER WERKE Maschinenfabrik GmbH

Ingo Wolf

Head of Marketing Services

Tel.: +49 (0) 7351 571 277

E-mail: i.wolf@vollmer-group.com

Carmen Fink

Marketing Services

Tel.: +49 (0) 7351 571 754

E-mail: c.fink@vollmer-group.com