

/ BACKGROUND TO THE COMPANY

VOLLMER focuses on tradition and innovation in sharpening

VOLLMER, the Biberach-based sharpening specialist, is the global full-line supplier for machining of rotary tools as well as circular and band saws. The machine manufacturer offers more than 40 grinding, eroding and laser machines with automation solutions for this purpose, supplemented with services for maintenance and training as well as digital solutions for IoT applications. Anchored by a long-term sustainability strategy, the VOLLMER Group and its subsidiaries Loroach GmbH and ultraTec innovation are ideally positioned to meet the current and future requirements of the tool manufacturing industry.

More than 25 grinding machines for the circular saw

Historically, grinding is the technology that characterised the founding period of the VOLLMER Group in Biberach. Founded in 1909 by Heinrich Vollmer, the company developed a then revolutionary process for grinding band, gang and circular saw blades in 1923. The first automatic sharpening machine of the C series with a rotating grinding wheel was created. For more than 100 years, VOLLMER has perfected the grinding of carbide-tipped circular saws and band saws. VOLLMER and its subsidiary Loroach now offer more than 25 grinding machines for circular saws and are the leading partners worldwide for saw manufacturers, chipping sawmills and sharpening services. With the right automation, customers can grind their circular saws without manual intervention and around the clock, on tooth faces and tooth tops as well as side angles. Depending on the model, up to three grinding machines can be automatically loaded with up to 650 circular saw blades using the VOLLMER ND handling systems.

VGrind models sharpen cutting tools

The two VOLLMER grinding machines in the VGrind series are suitable for machining carbide tools such as milling cutters, drills or reamers. They feature unique kinematics that enable efficient multi-level machining with two grinding spindles positioned one above the other. While the VGrind argon is suitable as an entry-level model, the all-rounder VGrind infinity offers various options for the automated machining of standard and special tools. It is also suitable for grinding PcBN tools (polycrystalline cubic boron nitride) – for this, the machine only needs to

be equipped with an optional dressing unit. Thanks to its high system rigidity and the drive for the X, Y and Z axes via linear induction motors, the machine can grind the ultra-hard PcBN cutting material with an oscillating process. Thermal stability is ensured by a plate heat exchanger that effectively cools the spindles and motors. The integrated spindle indexing of the VGrind infinity stops a spindle at exactly the same position during grinding wheel replacement, thereby reducing axial and radial run-out errors in grinding wheel packages.

Eroding PCD tools with wire and disc

VOLLMER eroding machines use spark erosion to machine cutting tools with PCD (polycrystalline diamond). An erosion electrode in the form of a wire or disc is guided close enough to the workpiece that a spark is generated between the electrode and the workpiece and contactlessly removes the material from the PCD-tipped cutting edge. VOLLMER has been using erosion technology for more than 30 years, and currently uses it for disc and wire erosion machines such as the QXD 250 and VPulse 500. Thanks to its thin eroding wire, the VPulse 500 specifically can be used to machine complex geometries and extremely small inner radii with precision down to the micrometer – structures which are typical of multi-stage tools and bell tools.

Disc erosion can be proficiently carried out using not only the QXD 250, but also the VOLLMER VHybrid 260 machine. As the name implies, this machine combines the two machining processes of eroding and grinding. In a single set-up, the VHybrid 260 can machine rotary tools made of carbide or tipped with PCD. This concept is in turn based on multi-layer machining, which is implemented via two vertically configured spindles in the same way as in the VGrind machines. With the VHybrid 260, the upper spindle is reserved for grinding, while tool manufacturers can use the lower spindle to carry out both grinding and eroding processes.

Machining ultra-hard tools with laser energy

The VLaser 370 laser machine uses the energy of a laser to contactlessly machine the cutting edges of machining tools made of ultra-hard materials such as PCD, CVD or PcBN. The innovative kinematics are based on the arrangement of the five axes, which ensures that the tool is always machined at the pivot point of the C axis. This makes it possible to machine tools with minimal axis movement and to ensure stable process control. At the same time, the kinematic chain enables high path accuracy, which has a positive impact on the machining accuracy and quality of the tools. The

VLaser 370 can optionally be equipped with a counter point to achieve even higher concentricity.

Services and digital solutions boost performance

Services for maintenance, servicing, training or financing as well as digital solutions complete the VOLLMER portfolio. The machine manufacturer offers various IoT (Internet of Things) applications via the V@dison initiative. For example, VOLLMER machines can be networked via IoT gateways in order to detect early maintenance or improve tool production based on process data. Web-based VOLLMER solutions connect customers with the technical helpdesk to enable virtual services worldwide. Software-based performance packages can increase the performance of sharpening machines at short notice and the central customer portal VPortal offers access to interactive 3D models of sharpening machines that can be virtually disassembled down to the individual component – which simplifies the ordering of spare parts, for example.

VOLLMER plays its part in ensuring sustainability

The energy efficiency of its sharpening machines is also part of the VOLLMER sustainability strategy, which goes far beyond energy-saving technologies and efficient use of resources. When it comes to sustainability, VOLLMER is primarily concerned with people: Long-term good relationships with customers, suppliers and employees are just as crucial for the future security of the company as technological developments. Last but not least, the foundation as a corporate structure also secures the long-term future of the mechanical engineering company. What's more, the Sieglinde Vollmer foundation supports the training of young people and promotes projects in the fields of STEM (science, technology, engineering and mathematics).

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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 and Thailand, as well as representative offices in Taiwan and Indonesia – 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. In offering this, VOLLMER draws heavily on the company's long-standing expertise and its strengths: Local contacts for efficient communication channels, quick decisions and rapid action by a family-run company. The VOLLMER Group currently employs approximately 800 workers worldwide, with around 580 of these at the 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. The VOLLMER Group is a reliable partner and provider of technology and services to its customers.

Further information and relevant images are available at: <https://www.vollmer-group.com/en-uk/company/press/press-releases.html>

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