

VOLLMER competency  
for **ROTARY TOOLS**



HIGHER PRECISION  
GREATER PRODUCTIVITY  
MANUFACTURING  
PCD ROTARY TOOLS  
SUCCESSFULLY WITH  
VOLLMER'S EXPERTISE

In 1909, Heinrich Vollmer developed the first saw setting and filing machines. His vision: maximum sharpness of cutting tools and saw blades. At VOLLMER, we successfully turn this vision into a reality – as we are willing to constantly make developments in this area.

In this way, many things have changed since Heinrich Vollmer first founded the company. New materials and the use of more and more sophisticated tools also entail new responsibilities for tool machining. At VOLLMER, we rise to this challenge with enthusiasm.

More flexibility, more efficiency throughout the whole process: with technologies and services from VOLLMER.

Nobody is more focussed on the profiles, blades and complex geometry of modern PCD rotary tools. Nobody researches and tests new technologies and processes more consistently, in order to constantly improve machining and production: in terms of machining time, the quality of the result and operating efficiency. This is hardly surprising as our developers, engineers and technicians have unequalled



experience and the latest knowledge concerning the use of modern erosion technologies.

What are you going to get out of it? Assured future-proof machines, applications and solutions that have also been subjected to practical testing, which consistently set benchmarks in reliability, precision and ease of use. Above all, services which are fine-tuned to your requirements, lighten your load and enable you to concentrate fully on your core business.

When you are in business with VOLLMER, you are not just going to profit from high uptime, precise results and therefore higher productivity during production of your rotary tools. You are also going to get the warm feeling which comes from the knowledge that you have a strong and forward-looking partner by your side. A partner who helps you to sharpen your company's profile.



# HIGH-TECH IN TOP FORM: THIS IS HOW PCD ROTARY TOOLS STAND OUT!

## DISK EROSION WITH VOLLMER

// With disk erosion, a copper tungsten disk acts as a rotating electrode. VOLLMER disk erosion machines ensure the highest precision and safety throughout the erosion process, whether during manufacturing or re-sharpening of wood and metal-cutting PCD tools. With the QXD 250 innovative VOLLMER technology now allows measuring, eroding, grinding and polishing – all in just one clamping operation.

## WIRE EROSION WITH VOLLMER

// With wire erosion, handling takes place in a non-conductive medium. The wire acts as an electrode and is so close to the piece of machinery that a spark appears, fusing and vaporising the material. VOLLMER wire erosion machines are best suited for processing the cutting edges of tools from PCD, PCBN and other ultra-hard cutting materials and impress with maximum precision and efficiency. The right decision for tools with profiles and complex geometry.

## MORE COMFORT OF USE WITH VOLLMER

// In the last 100 years, we have not just been working on machines. We have also been focusing on the people who operate them. The VOLLMER operating concept is geared towards making their work as simple, safe and pleasant as possible. The concept is intuitive and logical, and every single VOLLMER machine makes use of it. Users can therefore concentrate on entering less geometrical and technological data. Easily mastering complex processes: that is VOLLMER. Often copied, but never matched.

## AN EFFICIENT, HIGH-PRECISION PROCESS IS THE KEY TO PRODUCTION OF YOUR PCD ROTARY TOOLS!

VOLLMER therefore has a uniquely diverse portfolio of intelligent, high-performance high-tech machines specially for the machining of complex rotary tools – whether for production or service.

Be it the automotive, aviation or aerospace industry, machining of aluminium, magnesium, MMX or highly-abrasive laminates: VOLLMER provides you with the technologies required for the manufacturing and machining of the respective machining tools. Of course, we also have technologies for complete processing which includes measuring, eroding, grinding and polishing. Specially designed machines with integrated changing features and tool magazines enable fully-automatic sharpening even after closing time, in multiple shifts or at the weekend. The “ExLevel” is an intelligent software solution that allows you to run a simulation of your tool production in a way that is 100% realistic.

These pages will give you an initial overview of the VOLLMER machines that you can use to make handling of and working with rotary tools a highly efficient process.





/// EROSION

With its comprehensive range of machines, VOLLMER offers solutions for the following areas of application:

- // wood-cutting, PCD-tipped precision tools
- // metal-cutting, PCD-tipped precision tools
- // PCD-tipped circular saw blades (see brochure product overview circular saws)
- // automation of machines for processing "round the clock"

A SPECIFIC ADVANTAGE:

The high precision and surface finish attained means that the grinding stage is often not required when processing tools with VOLLMER machines.



Highest precision for sophisticated tools

/// DISK EROSION

//// QM eco select



Disk erosion machine with 5 CNC-controlled axes and 2 manual axes. For automatic measuring and erosion of tools with cutting edges made of PCD and other ultra-hard cutting materials, with unsupported clamping.

TOOLS	OUTER DIAMETER*		EROSION
	min	max	
METAL			
Spiral drills	-	-	mm
Milling cutters, soldered	5	-	mm ✓
Multi-stage tools	-	-	mm
Milling cutters/reamers, sinter technology	-	-	mm
Reamers, soldered	-	-	mm
WOOD			
Drills, soldered	5	-	mm ✓
End mills	10	100	mm ✓
Cutting tools		380	mm ✓
Profiling tools	5		mm ✓
Jointing tools		250	mm ✓
Flooring tools	-	-	mm
Saws		600	mm ✓

\* The measurements given above are understood as examples. Please ask your representative at VOLLMER for the many other outer diameters which can be processed with this machine.





QXD 250

Disk erosion machine with 6 controlled CNC axes for complete processing of PCD-tipped tools with automated polishing process for PCD tips. Measurement, erosion, grinding and polishing in a single clamping arrangement.



TOOLS	OUTER DIAMETER*		EROSION	GRINDING GEOMETRY	RELIEF GRINDING	POLISHING
	min	max				
METAL						
Spiral drills	2.5	mm	✓	✓		✓
Milling cutters, soldered	5	mm	✓		✓	✓
Multi-stage tools	5	mm	✓		✓	
Milling cutters/reamers, sinter technology	2.5	mm	✓	✓		
Reamers, soldered	5	mm	✓		✓	
WOOD						
Drills, soldered	5	mm	✓			
End mills	8	mm	✓		✓	✓
Cutting tools		320 mm	✓		✓	✓
Profiling tools	5	mm	✓		✓	
Jointing tools		320 mm	✓		✓	✓
Flooring tools	-	- mm				

\* The measurements given above are understood as examples. Please ask your representative at VOLLMER for the many other outer diameters which can be processed with this machine.



Automation solutions on pages 12/13



Eroding a profiled workpiece



/// WIRE EROSION

//// VPulse 500

Wire erosion machine with 5 CNC-controlled axes with external automation. For automatic measuring and erosion of tools with cutting edges made of PCD and other ultra-hard cutting materials, with unsupported clamping or between the centres.



QM eco select



QXD 250



VPulse 500

PCD ROTARY TOOLS

METAL

Spiral drills



Milling cutters, soldered



Multi-stage tools



Milling cutters/reamers, sinter technology



Reamers, soldered



WOOD

Drills, soldered



End mills



Cutting tools



Profiling tools



Jointing tools



Flooring tools



Saws



Scoring saws



TOOLS	OUTER DIAMETER*		EROSION
	min	max	
METAL			
Spiral drills	-	- mm	
Milling cutters, soldered	5	mm	✓
Multi-stage tools		320 mm	✓
Milling cutters/reamers, sinter technology	-	- mm	
Reamers, soldered	5	mm	✓
WOOD			
Drills, soldered	5	mm	✓
End mills	5	mm	✓
Cutting tools	-	- mm	
Profiling tools		320 mm	✓
Jointing tools		320 mm	✓
Flooring tools		320 mm	✓

\* The measurements given above are understood as examples. Please ask your representative at VOLLMER for the many other outer diameters which can be processed with this machine.



Automation solutions on pages 12/13



/// AUTOMATION

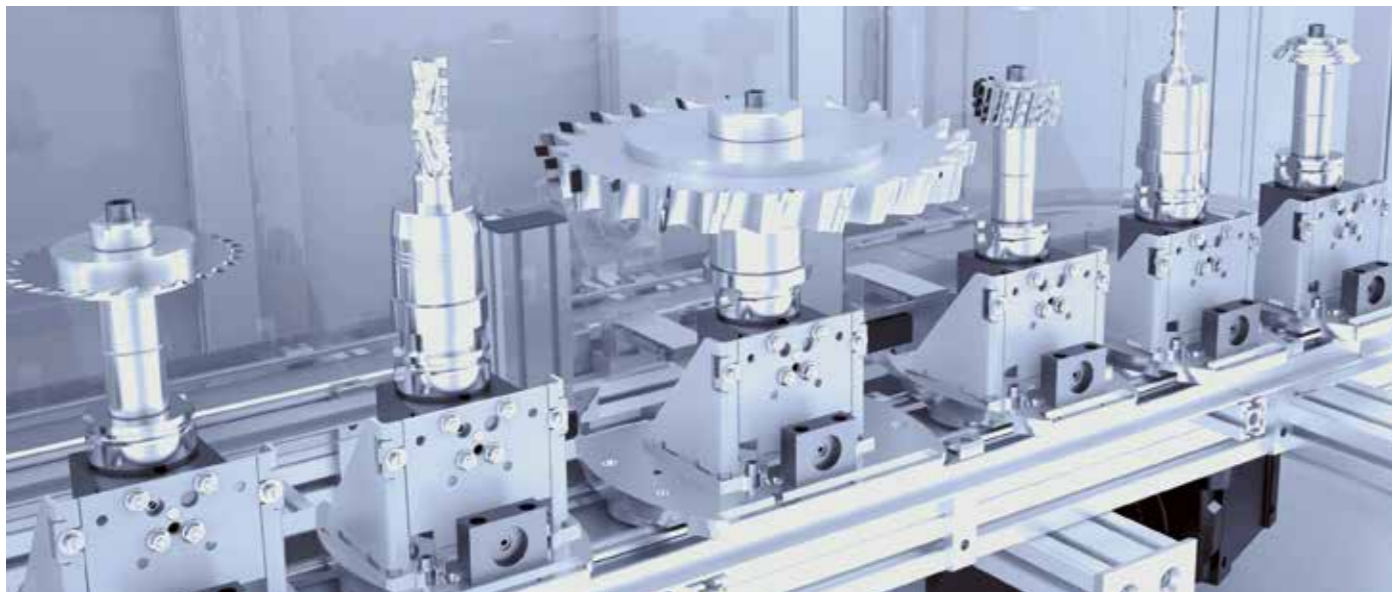
VOLLMER also has the suitable automation solutions for all companies who wish to use PCD rotary tools with high efficiency and productivity as well as minimum labour utilisation – without compromising on the quality of the result: machines with integrated charging features and tool magazines for automatic processing of up to 64 tools. It is possible to load and unload the magazine without stopping the machine operations.



This sign will help you to recognise machines that are already optimally prepared for an internal or external automation solution and are therefore the first choice for fully automatic complete processing.



External magazine HR



External magazine HC 5

/// EXTERNAL MAGAZIN

QXD 250	SK 50 / SK 40 / HSK 63-A / HSK 63-F
HC 5	Pallet circulation magazine up to 28 slots
HC 11	Pallet circulation magazine up to 64 slots
VPulse 500	SK 50 / SK 40 / HSK 63-A / HSK 63-F
HR	Round magazine up to 16 slots
HC 5	Pallet circulation magazine up to 28 slots
HC 11	Pallet circulation magazine up to 64 slots



/// CONSUMABLES

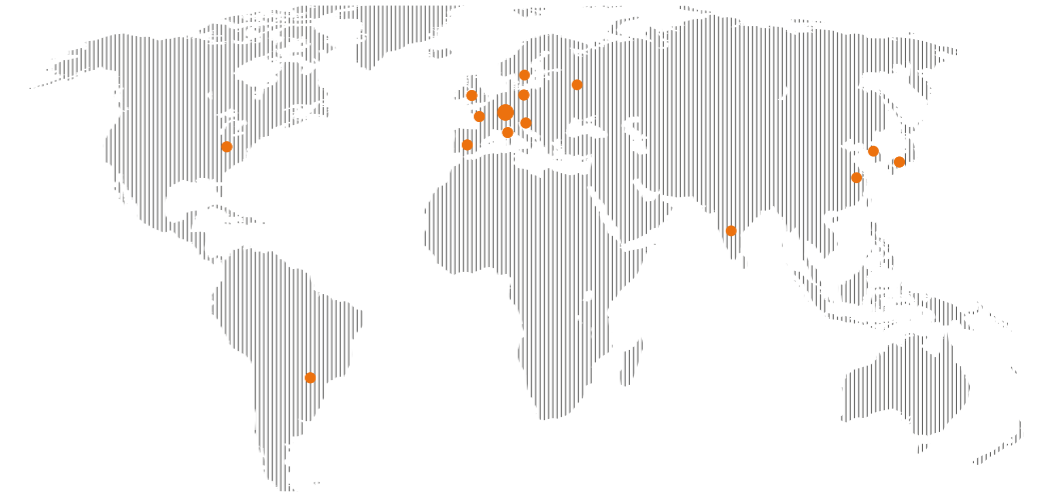
At VOLLMER, you will not only get sharpening and eroding machinery perfectly tailored to your requirements, but also all the important auxiliary, maintenance and consumable materials – optimally tuned to it – for smooth and efficient deployment. Improve the uptime and service life of your original VOLLMER machine. With the original VOLLMER quality.

CONSUMABLES PCD ROTARY TOOLS

- // Dielectrics
- // Grinding disks
- // Eroding disks
- // Eroding wire
- // Expendable parts



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## /// CUSTOMISED SERVICE

In this competitive environment, VOLLMER is on your side, with highly efficient high-performance machines. And with a complete portfolio of services that are perfectly matched to your requirements. Our services help you ensure that your VOLLMER machines reach and sustain their full potential. And enable you to concentrate fully on that which is most important: Your success.

