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HUNTER PRECISION TOOL BUILDS FOUNDATION ON PRECISION GROUND SAW BLADES

When Ron Migedt and his eldest son Johnny set up Hunter Precision Tool in June 2021, the first thing the new start up company did was purchase a VOLLMER CNC grinding machine. As a company that has grown at a tremendous rate since its inception, this success is down to the long-established track record of the company owners and their longstanding reputation in the marketplace....and of course the quality of products manufactured on the VOLLMER machines.

Located in Elkhart, Indiana, Hunter Precision Tool manufactures and services a variety of PCD, carbide, and HSS tools for the machining of wood, plastic, composite and non-ferrous metals. The product line-up includes everything from saw blades, groovers, router bits, shaper heads, profile knives and inserts and insert tooling through to drilling and boring tools and much more. To manufacture such a diverse range of products for a company just over two years old is a testament to the expertise within the business, with Ron previously being the owner of a cutting tool manufacturing business with a long history of success.

Upon starting the business in Elkhart, a city just over 100 miles East of Chicago, Ron recognized from his previously successful ownership of VOLLMER saw grinding machines that a VOLLMER CHD270 with an ND230 automation system was the best place to start. Whilst the business initially started with circular saw blade servicing and re-grinding, progression into rotary solid carbide and PCD tools such as routers and profiling tools soon followed. The rapid ascension of the business now sees Hunter Precision Tool occupy a 6,500sq/ft facility with imminent plans for a new facility to accommodate its growth. The need for a new site is to house its investment in turning and machining centres, induction brazing technology, Zoller pre-setting equipment, Haimer tool balancing systems and the latest acquisition, a VOLLMER VPulse 500 wire EDM machine for PCD tool production.



The cornerstone for Hunter Precision Tool was the sales, re-grinding and servicing of circular saw blades – a business division that continues to grow at pace. At the core of this department is the VOLLMER CHD270 with an ND230 automation system. Alluding to why the company acquired the VOLLMER CHD270, Company President Ron Migedt says: “At previous companies, we have bought VOLLMER machines and they have excelled in performance, productivity, quality and service. When it comes to saw blade sharpening, VOLLMER would always be our first call.”

The CHD270 is the ultimate sharpening machine with eight CNC-controlled axes and measuring equipment for complete automatic machining of saw blades. The CHD270 is perfect for the processing of carbide-tipped circular saw blades with different diameters and tooth geometries on the tooth faces and tops. The CHD270 was installed in September 2021, and with its 3 carriage ND230 automation station, it now runs around the clock to service the ever growing customer base.

Discussing the daily operation of the CHD270, Ron says: “We’ve had saw blade sharpening machines from other suppliers in the past and they haven’t had the flexibility to cater for the entire spectrum of saw blades. The VOLLMER CHD270 has the flexibility to produce every type of blade we produce, and it has a lot of unique functionality with it.”

Alluding to this, Ron adds: “In our region, we produce a lot of hollow face saw blades for the cutting of laminated sheets and hollow boards. This demands an exceptional cut quality as the sheets cannot tear or delaminate on the edges. To facilitate this, we specified the VOLLMER CHD270 with the hollow face spindle attachment. This ensures the blades we produce are of impeccable quality.”

As a saw blade servicing workshop, the variation of saw blades entering the facility is unfathomable. Saw blades can be anything from batch quantities down to 1-offs with each saw having different diameters, geometries and tooth pitches. To facilitate this in the most efficient manner, Hunter Precision has the 3 carriage ND230 automation station alongside the CHD270. This enables the manufacturer to load up to 100 saw blades into the ND230. The ingenuity of the CHD270 will then differentiate the different saw blades and process them accordingly.



“We have all the programs for our saw blades in the VOLLMER, so the machine automatically probes each blade and then processes it and returns the saw to the stacking station. This allows us to load up to 100 saw blades at a time and run the machine unmanned overnight – returning in the morning to finished saw blades that are ready for delivery to customers. We can run upward of 500 to 600 saw blades each week on the VOLLMER with day shifts reserved for custom modifications and program generation for new saws,” says Ron.

With the CHD270 presenting itself as the epitome of automation for saw blade sharpening, Hunter Precision Tool stepped into the round tool industry, initially distributing tools for recognized brands prior to investing in turning and machining centers for producing tool bodies. This has been followed by an investment in induction brazing technology and the VOLLMER VPulse 500 wire EDM machine. Discussing this, Ron Migedt says: “Once upon a time there were only two grades of PCD and limited tool geometries, but there are now countless PCD grades and machines like the VPulse 500 have almost limitless capabilities to create any geometry. To create tools with the right PCD grade and geometry for the best performance on specific materials requires decades of expertise – and this is what we have at Hunter Precision. However, we needed the right machine to manufacture our tools – and this is where VOLLMER has played a crucial role.”

WHY THE WIRE?

The decision to invest in a wire EDM machine was a process of elimination, as Ron adds: “We looked at all the options and vendors out there. We considered laser, but the size range of laser machines didn’t fit our needs. We manufacture everything from micro-tools right up to 12-inch diameter tools and lasers have capacity limitations – so it wasn’t the right time for a laser. We also looked at erosion machines like the VOLLMER QXD. Disc erosion provides exceptional surface finishes, but we decided upon a wire machine and without doubt, it had to be a VOLLMER.”

Discussing the selection of the VPulse 500 that was delivered in March 2023, Ron says: “One of the main reasons we opted for the VPulse 500 is the horizontal orientation of the wire. We can orientate the cutting head to some pretty extreme angles which gives us incredible flexibility. It also prevents collisions with other tips on the tools. Furthermore, we can erode chips out of existing tools.”

VPULSE – A NEW GENERATION

Of course, surface finishes on the cutting edges of tools can be critical to tool life and machining performance, and here the new VPulse 500 exceeds the performance of alternate machines with its VPulse EDM generator technology that is seen on a wire EDM machine for the first time. As Ron adds: “Compared to VOLLMER wire EDM machines that we have had in the past, the new VPulse EDM generator is 25 to 30% faster than its predecessor. Not only is the machine more productive and more powerful, but we can achieve much sharper edge and surface finishes, which improves the performance of our tools for the customer. When it comes to machining materials like composites, the edge finish and tool sharpness make a huge difference. In our geographical location, there are a lot of kitchen and RV manufacturers that demand ultra-sharp cutting tools for wood and composite machining where impeccable surface finishes are required – with the VPulse we can deliver the best tools with exceptional finishes. The efficiency of the generator also reduces the cost per hour of the machine.”

Since its installation in March, the VPulse 500 has been running around the clock, 24/7. To enable this, Hunter Precision purchased the VPulse 500 with the HR automation system that can accommodate 16 tools with a maximum diameter of up to 12 inches and an overall length of up to 19.6 inches.

FLEXIBLE PRODUCTION NEEDS

As a company that designs, manufactures and services a high number of bespoke cutting tools, set-up times are critical for Hunter Precision. Here, the VPulse 500

demonstrates how innovations from VOLLMER are making a huge difference for the end user. One new introduction of the VPulse 500 is the contour edge measuring system that will follow the contour of the tool to collect more measurement points – faster than ever before. “Quality and set-up times are very important to our business and with the new probing system, we can probe our tools at least 50% faster than before. By doing this in a fraction of the time, we can collect more measurement points. This reduces potential quality issues, especially where there are variations in cutting edges due to the brazing process.”

The probing system works harmoniously with the CNC control panel as the intelligent ExProg programming system incorporates a user-friendly navigation menu for quick and easy acquisition of key parameters. One new feature is the ability to record, review and analyze documentation. As Ron states: “The control panel has a user-friendly layout and the Exprog software is very intuitive. We can add notes to tool programs regarding machine set-ups that operators can easily access the next time they are working on the same tool. Previously, we had to take notes and store them in our ERP system, now this critical information is at hand for every repeat or regrind tool we produce. This significantly cuts down set-up times for the shop floor.”

The advancements in the ExProg software suite enable individual data to be assigned to each contour element of the tool and profiles can be divided into part contours to deliver even greater flexibility. “The software is very advanced, and it gives us feedback on a wide range of parameters. This gives us greater visibility of processing times, power consumption and any processing deviations. Even the simulation suite is contributing to our set-up time reductions. It simulates everything from the toolholder to the wire and the jaws – ensuring we never get a collision. Overall, we have been delighted with the machine. Its productivity, quality and technical advancements have been a huge benefit to our business. One thing that is not always a given is service – but VOLLMER of America excels here too. The service and support from VOLLMER of America has been excellent.”

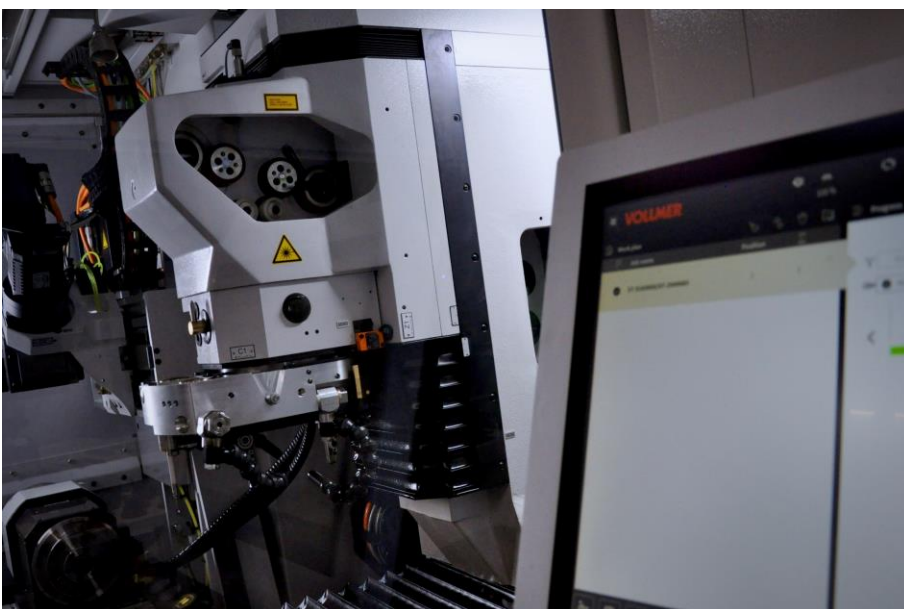
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(approx. 1,750 words)

More information on Hunter Precision Tool: www.hunterprecisiontool.com

Press Images



Caption: Johnny Migedt, Vice President at Hunter Precision Tool, and Ron Migedt, President at Hunter Precision Tool in front of their VOLLMER VPulse 500



Caption: The VOLLMER VPulse 500 wire erosion machine at Hunter Precision Tool



Caption: The VOLLMER VPulse 500 wire erosion machine at Hunter Precision Tool



Caption: Hunter Precision Tool in Elkhart, IN

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 Russia – enjoys global success as a tool machining specialist in terms of both production and service. The technological leader's range of products contains the most advanced grinding, eroding and machine tools for rotary tools, circular saws and metal cutting band saws in the wood- and metalworking industries. In offering this, VOLLMER relies heavily on tradition and the company's strengths: Local branches, quick decisions and rapid action by a family-run company. The VOLLMER Group currently employs approximately 800 workers worldwide, with around 550 of these at the main headquarters in Biberach alone, including more than 50 trainees. The company invests around 8-10% 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.

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