

Modern WOODWORKING

April 1995 • Volume Seven • Number Four

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Tooling Innovator

Diamond Tooling Manufacturer Offers Precision, Durability for the Woodworking Industry

By David Billions
Associate Editor

Horst Lach has been regarded as an innovator in the diamond tooling industry for over thirty years. His company, Lach Diamond Inc. continues to prove itself as a pioneer in every segment of diamond tooling from resharpening and grinding services for all custom made diamond tooling for the wood and furniture industry to the new advantages of the "dia-economic" program which includes disposable diamond router bits and scoring blades.

In 1979 Lach added the Lach Spezial-Werkzeuge GMBH to his father's original Lach Diamond Company which was established in 1922. The American company, Lach Diamond Inc., was born in 1982, and in 1985 Lach opened the company's and America's first service and resharpening facility for diamond woodworking tooling, located in Grand Rapids, MI. Today, the German company, Jakob Lach GmbH has over 140 employees while the American facility employs about 20 full-time workers.

The company currently offers a complete line of diamond tooling



Horst Lach, president and owner of Lach Diamond Inc., predicts a bright future for the diamond tooling industry.

and resharpening services in addition to its own developed universal-diamond grinding machines which operate according to the LACH-EDG grinding process.

"We manufacture polycrystalline diamond tools which are less sensitive to impact than monocrystalline structured diamonds (natural diamonds), and they have been proven to last up to 200-300 times longer, and in some cases up to 700 times longer than traditional tungsten carbide tooling," said President and Owner, Horst Lach.

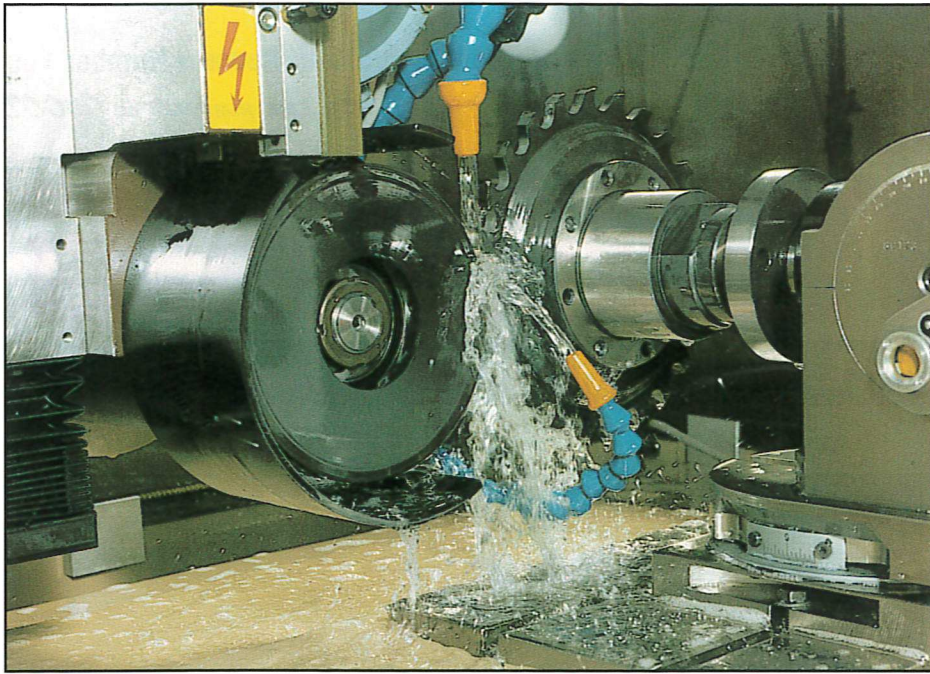
Diamond Tooling Advantages

According to Lach Diamond, polycrystalline diamonds can be used to cut well-known wood mate-

rials like hardwood and particle board as well as MDF and high density boards.

Diamond tooling is also quite versatile in its applications. For instance, polycrystalline tools can be used on double-end tenoners, routers, shapers, saws, edgebanders, jointers, dovetailing machines, moulders and special machines. The tools are also capable of producing a wide range of profiles from a single groove profile to groove patterns for hardwood flooring, V-grooving and architectural mouldings to name a few.

In general, synthetic diamond tools offer several advantages over traditional brazed carbide-tipped tooling and insert tooling. "One of



Diamond tools can be sharpened by the Series M-1050/2050 Universal grinder. The machine grinds according to the patented "Original LACH-EDG" sharpening process.

the main reasons for the use of polycrystalline diamonds is reduction in downtime, which ultimately leads to an increase in productivity," Lach said. In many cases diamond tooling may also eliminate the finishing and sanding stages of production. "Diamond cutting edges will perform cuts with top quality finish, that would be considered problem cuts for carbide," he added.

In the long run, diamond tooling reduces costs and lasts longer than carbide cutting tools while also providing a quality precision cut.

Diamond Tooling Innovations

In 1979, at the LIGNA Woodworking show in Hanover, Germany, Lach Diamond presented the first complete polycrystalline

diamond tooling program for machining wood, all wooden materials and plastics.

Since then, the company has expanded into other areas of business including resharpening, profile grinding and "dia-economic" disposable diamond tooling. "Presently we offer almost any type of diamond tooling produced in carbide, edge cutters, shapers, scoring blades and dividing saws of up to 26 inches in diameter," Lach said.

The company also engineers and produces a full line of CNC controlled diamond grinding machines, which according to Lach Diamond Inc., can resharpen polycrystalline tools up to 8-12 times. The series M-1050/2050 universal grinder sharpens all multi-toothed polycrystalline

diamond tooling with up to 600 mm diameter and a maximum cutting profile length of 120 mm tooth by tooth automatically. The machine grinds according to the patented "Original LACH-EDG" sharpening process, "cool spark".

Lach Diamond Inc. recently introduced its "dia-economic" disposable tooling program which consists of diamond tool router bits, scoring blades and trim heads that do not require resharpening. In addition to offering the disposable diamond routerbits in inch sizes, the company now offers an extensive standard inventory in metric sizes, with both right and left hand rotation.

Lach sees a bright future for both his company and the diamond tooling industry in general. With a continued trend towards complete CNC automation in the woodworking industry, diamond tooling should remain an integral part of the manufacturing process in not only modern woodworking plants but also sectors of the automotive, electrical and plastic industries.

"The rapid growth of CNC machinery started the quick development of diamond tooling applications. Today, sintered carbide cutting edges are being replaced more and more by diamond tooling for long run production. Since the introduction of Lach Diamond tools at the LIGNA 79 fair, our diamond tooling for long run productions of wood and plastic products has proved superior and economical compared to carbide. This is clearly shown in cost comparisons," Lach added.

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