

**With Kindest Recommendations From  
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**“Two German companies discover  
diamonds are their best friends”**

# Two German companies discover diamonds are their best friends



By Wellington Long

*There's no denying it. Synthetic diamond cutters are expensive.*

*By a supplier's own calculations, a diamond cutter can cost 20 times more than a comparable alternative cutter. Yet, in Europe, synthetic diamond cutters are becoming popular and suppliers say the trend will continue.*

*The underlying reason for this popularity can be found on the production*

*floor: Diamond tools cost more than conventional tooling, but they may make up for this cost in reduced operating expenses. On the average, suppliers say synthetic diamond cutters can save the user anywhere from 20 to 40% in the long run.*

*Horst Lach, owner of Lach Spezial, a West German manufacturer of synthetic diamond cutting tools for the woodworking industry, said that these savings result from the diamond cutter's ability*

*to hold an edge longer than conventional cutting tools, thus decreasing downtime and grinding costs.*

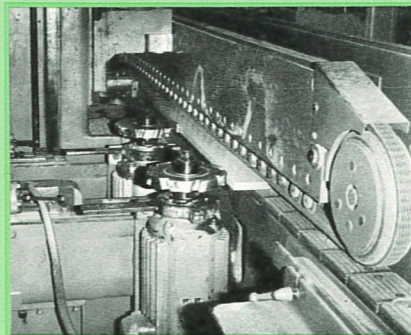
*However, synthetic diamond cutters are not for everyone. According to Lach, they should be considered mainly by woodworking companies involved in "mass production, and where other hard metal tools have hindered the production run because of frequent tool changes and added downtime."*

## Cabinetmaker's sanding operation reduced

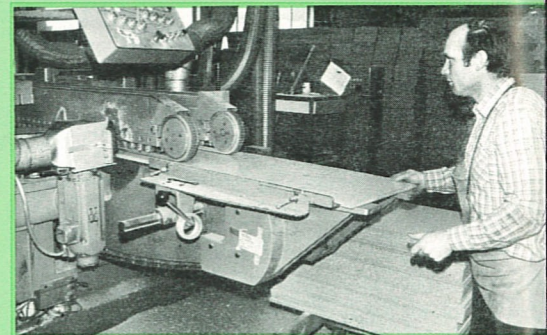
In Melle, West Germany, Rational Kitchens installed its first synthetic diamond cutter for chipboard in April, 1981.

Since then, the plant has added ten diamond cutters, with more on order. Rational's other three West German plants have bought several, and the works in Cork, Ireland, is being equipped exclusively with them.

Alfons Bonhaus, plant manager at Melle, explained Rational's commitment to diamond cutters. "With hard metal cutters, we had to allow 192 minutes for retooling every 8-hr. shift. Often we had to allow overtime working in order



*Rational Kitchens in Melle, West Germany uses diamond tooling in its edging operations on chipboard.*



*The company said the diamond tools have stayed sharp for up to 200,000 linear meters—and has eliminated a sanding step.*

## Manufacturer's production line flows smoothly

At Bentrup, Wolfgang Michael has been using diamond cutters on his routers and groovers since August, 1981.

Michael is the technical director of the Bentrup plant of the CS-Collection Stil Corp., part of the Schieder Group. His plant manufactures high-end living room period furniture of solid American red oak.

"We use diamond tools because they have good, clean cutting quality," says Michael. "The economic advantages that result from the long time they hold their cutting edges more than offset the initial cost.

"To route one of our profiles in American red oak means a cut of between 1.00 and 1.60 meters," he said. "One

of our hard metal tools will perform between 200 or 300 cuts before it requires sharpening. With the diamond tool, we can get 25,000 or even 35,000 cuts before resharping."

"With hard metal tools, we had to retool the router two or three times a day," he said. "This delayed production all down the line. Diamond tools make it possible to keep production moving smoothly."

Michael noted the tools cut so cleanly that the four workers who used to stand behind the router smoothing the finished cuts with sandpaper have been transferred to other tasks.

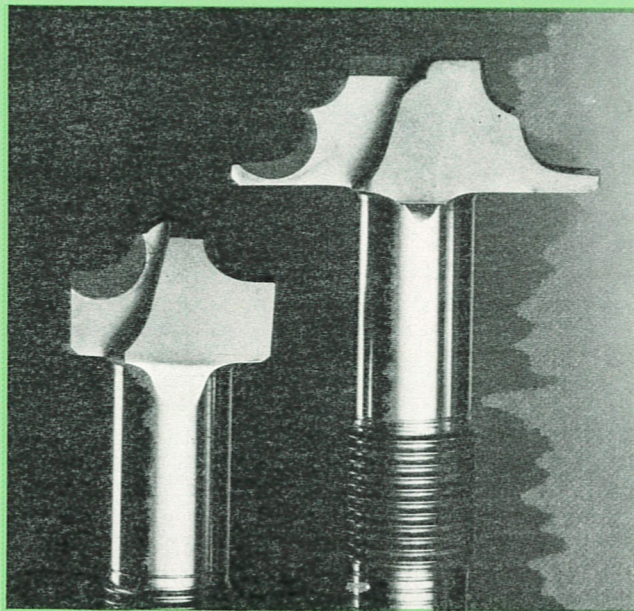
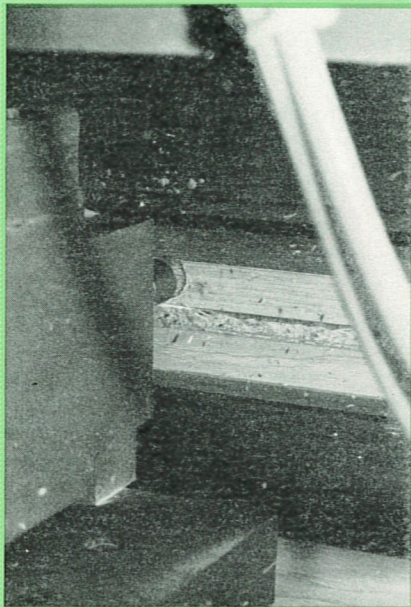
Less vibration on the company's large Japanese-made, revolving-head Heian

is another benefit Michael attributes to the diamond tools.

And a final point. "We make sections of fronts not only for our own assembly, but also for assembly by other group plants," Michael said. "It is essential that these fronts fit correctly. With hard metal tools, the profile changed slightly with each sharpening."

Hans Riepe, a Lach sales rep who was originally trained as a tool maker, said this is because hard metal tools are sharpened on the side, reducing their cut. "Lach's diamond tools are sharpened from the breast. This leaves the profile unchanged." A diamond cutter tool, he claims, can be resharpended as many as ten times. ■

**Suppliers say synthetic diamond cutters can save the user anywhere from 20 to 40% in the long run . . . but diamond tooling is not for everyone.**



*Far left: A diamond boring tool at work. Left: A close-up of diamond milling tools for routers.*

to maintain production schedules. With diamond cutters, we have eliminated both the daily downtime and the overtime."

He noted that one Lach Spezial diamond cutter needs resharpener after cutting between 100,000 and 150,000 linear meters of compressed chipboard. Sometimes they stay sharp for 200,000 linear meters, he said.

The resulting savings in resharpener goes a long way towards justifying the initial cost of a diamond cutting tool, which Bonhaus said is high. Normally, I sign all purchase orders for the plant myself," he said. "But for that first Lach Spezial diamond cutter, I had the boss

sign the purchase order."

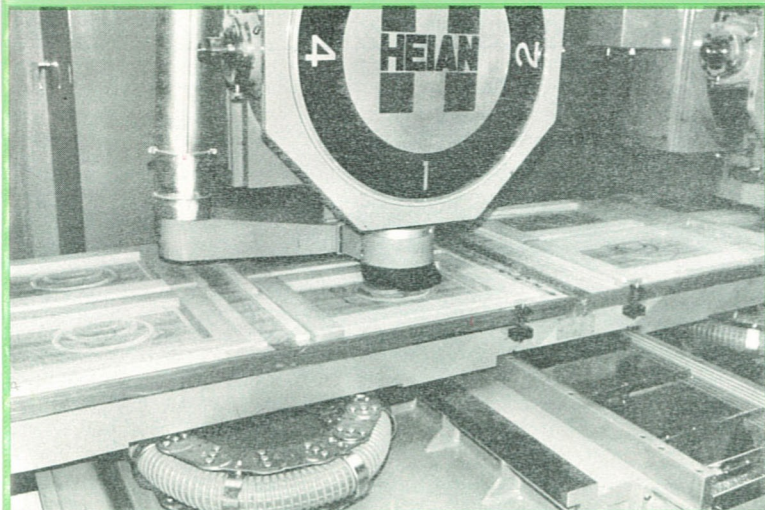
Other cost savings have resulted from reduced labor needs on the production floor, said Bonhaus. For example, Rational used to position several workers after the edging machine to sand the edges before passing them on to further production. With the diamond cutters, the edging machine cuts so smoothly that the additional sanding step is no longer required.

One drawback noted by Bonhaus is that the diamond cutters must be used on highly compressed chipboard. They will rip the center out of low-quality chipboard, he said. With this in mind, Bonhaus has instructed suppliers to provide

him with highly compressed materials. This has eliminated the machining problem and at the same time made the final product more resistant to fire.

Rational's final products are kitchens and room dividers that will be introduced to the U.S. at the Dallas Market this spring. The company hopes to find an American contact willing to import and assemble their products in the U.S.

"We think there is a demand for German kitchens in the U.S.," said Harald Trapp, Rational's advertising manager. "The Americans get their kitchens up a bit more spectacularly than we do, but we use better production technology. We think there's a market for that."



*Far left: The Bentrup plant of the CS-Collection Stil Corp. uses diamond tooling on its Japanese-made Heian router. Left: The company manufactures primarily high-end living room period furniture of solid American red oak.*