



high precision tooling

Machine Tools, PCD, PVD, CVD, CBN, Hard Metal

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materials & tools

LACH DIAMANT looks back on 100 years – 14th part

Poly – poly – or what?

Yeah, here I come...

the diamond as a tool in the furniture industry,
as well as in wood and plastic processing industries

Yesterday evening, in the middle of the daily news show, I jumped up spontaneously – and my wife noted with surprise that I suddenly grabbed paper and pen.

“Yeah, here I come...” was what I jotted down as the title of my next “Poly – poly or what?” article.

No worries, I will not write down my full life story, but I might have been inspired by a report on TV: “Despite Corona, the German furniture industry, especially kitchen furniture, is doing well.”

That comes as no surprise, considering the lockdowns, home office and confinement to the privacy of our homes. On top of that, no vacations, no money spent in restaurants and bars. A continued focus on our own home surroundings and constant activities in the kitchen inspire a change in furniture.

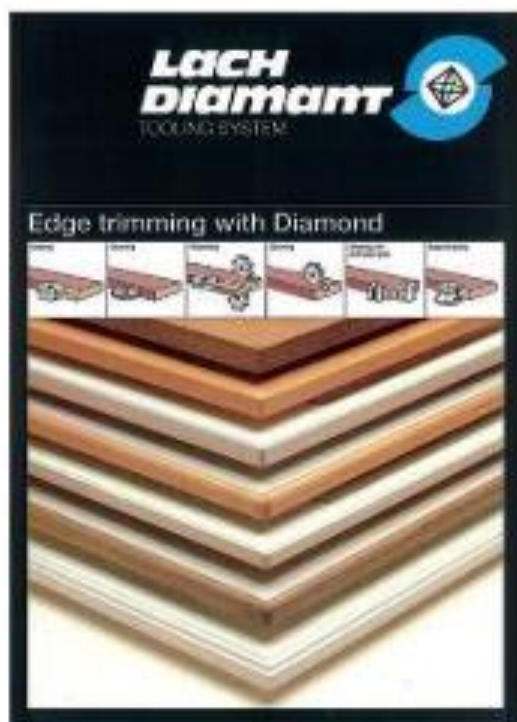
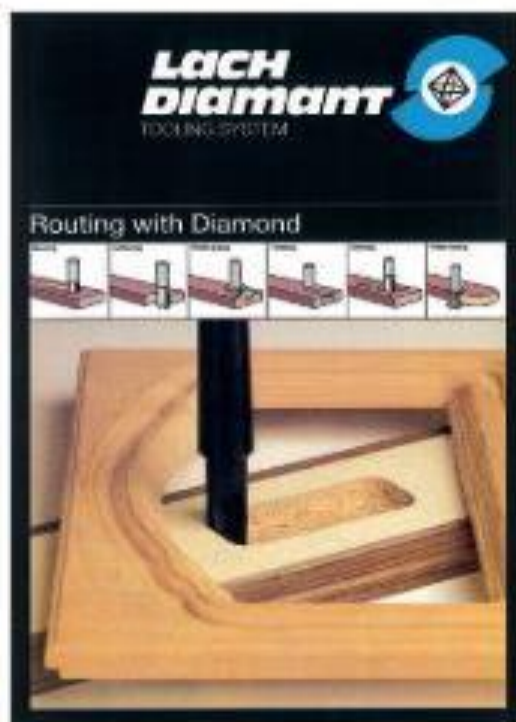
Obviously – and quite natural for Horst Lach – diamonds come into the mind, both in a narrower and in a broader sense, and in connection with the machining of wood and plastic composites.

Doing so, I do not yet know who my readers will be, so please forgive me for this. Our example today, the diamond, is by now known as dia tool within the industry.

It all began 44 to 45 years before today's date (1978/79). Actually, it already started approximately 50 years ago, in 1973, when *General Electric* was the first manufacturer to offer polycrystalline diamonds under the trademark of “compax”. A development I experienced personally, and which I can only share due to my advanced age and my own profession. Therefore, I can understand how, during a continued industrial revolution, an ever-increasing demand for mass production ignited the desire for abrasive cutting tools with ever-greater stability – in the end for the hardest of all things – DIAMOND. And this not only in the metal industry, and in machine construction, but also for machining of all wood materials.

In the mid/end 60's, a “high-flyer” cutting material replaced previously used high-speed steel (HSS) for the first time – the very name of a trademark of *Krupp* company in Essen reflected this “desire” for the hardest of all things – *Widia* (based on the German term “wie Diamant” = like diamond).

And then – just when “hard metal” had established itself in the market, due to a parallel and fast-paced development of resin bond diamond grinding wheels – out of the blue, a manufacturer named *Lach-Spezialwerkzeuge GmbH* (LACH DIAMANT) presented a complete dia tool and saw programme for the wood and plastic processing industry at LIGNA 1979.



LACH DIAMANT
at LIGNA 1979

**LACH
DIAMANT**
TOOLING SYSTEM

Panelizing with Diamond

LACH DIAMANT
at LIGNA 1979

**LACH
DIAMANT**
TOOLING SYSTEM

Sawing with Diamond


Under the slogan "Your Way to Diamond Economics", Lach-Spezial offered diamond tools with tool times far-superior to carbides (up to several hundred times), according to the regulations of the trade association's "BG-Test and BG-Form". Despite the initially high tool price, diamond tools proved to be efficient from the start on – straight-edged dia cutting edges were priced at 70-80DM (Deutsche Mark) per mm, profile cutting edges at 100DM (Deutsche Mark) per mm. Thanks to a close collaboration between LACH DIAMANT and General Electric, the prices for polycrystalline diamond inserts could be lowered significantly during the 1980's. The development of new markets for PCD tools in the aviation and composite industry followed.

As a typically medium-sized industry, furniture and kitchen furniture manufacturers took the lead in utilizing these versatile and cost-reducing production and design options and

became the top customers for polycrystalline diamond cutting tools and saws; even ahead of the aluminium-machining automobile industry. At that time, the control technology of wood working machines was superior to controls of metal working machines, e.g., through the early switch from numeric (NC) to CNC controls.

However, I should not forget to mention that not only furniture manufacturers profited from the new cutting material diamond – but also their employees. For example, now it was no longer required that a master craftsman had to be present for changing the tool during each shift in a 3-shift operation, a common practice for edging machines. Without any re-sharpening, the diamond tool would run for 3 to 6 months! From the beginning to the end of its tool life, there was no loss in sharpness, which proved to be a sales-promoting factor and a special advantage, especially for decoratively coated MDF boards (medium-density fibreboards).

During a visit in the USA – after founding LACH DIAMOND INC. in Grand Rapids, Michigan – I witnessed the production of a massive, 40 mm thick, 1.5 m-diameter oak table top in one of the larger "furniture shops". Two very muscular men had to use all their strength to circle this table top with a vertical Knoevenagel milling cutter. I will never forget this image. Months later, the new diamond tool allowed for only one man to do the same job without any pause or break, and without the previous struggle.

However, I must admit that the respective workers were not that grateful to me and did not look at me that friendly; as I found out afterwards, their heavy labour bonus had been cut.

Horst Lach
**Your Way to
Diamond Economics**


LACH Diamant, the worldwide pioneer in diamond tooling for all woodworking applications, is here for you. For

*Diamond
tools with
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Further information: www.lach-diamant.de