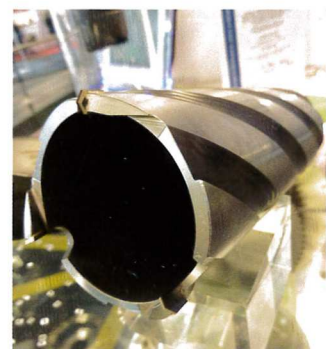
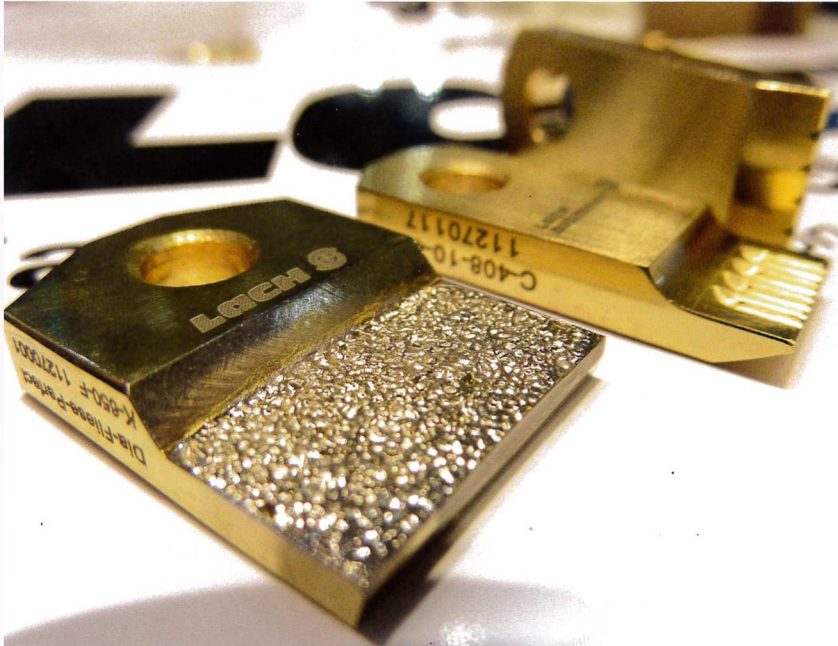


# Golden Dressing – Chip-free Drilling

By Harald Klieber\*

(\*translated from German to English by Gudrun Cruz, GLS – German Language Service)

92 years of innovation. Lach Diamant proved it at EMO and demonstrated it again at Grindtec: SMBs are the driving forces behind spectacular innovations. The family company located in Hanau, Germany, introduced four exciting novelties: A PCD solid drill with inner exhausting for GRP and CFRP, diamond and CBN grinding wheels for high-speed grinding, the patented system “Cool Injection” and “Dia-Fliese-perfect” which is classified as the perfect dressing plate by CEO Horst Lach.



“This is a superior diamond dressing plate for flat dressing and profiling of conventional grinding wheels,” comments CEO Horst Lach at the world premiere of his most spectacular invention. It is not very large but the golden platelets immediately draw attention to the display-case. “This is not a new idea,” explains Horst Lach this novelty. Compared to conventional dressing plates the new design of “Dia-Fliese-perfect” now allows for precise settings and full utilization of the visible diamond coating.

**Lach Diamant exhibits the golden diamond dressing plate at Grindtec. It should guarantee longer tool life and consistent grinding results.**

**PCD solid drill with inner exhausting for glass and carbon fiber materials, graphite, green ceramics and hard metals.**

Due to a newly developed binding system F, “Dia-Fliese-perfect” guarantees a consistent dressing behavior over the entire lifetime. The product will be shipped in all standard dimensions, and specific for each type of grinding wheel.

Lach Diamant offers four different designs: Design K with diamond granulation, design N with natural diamond needles (radius according to specific grinding wheel), design C for diamond CVD rods and design M for MKD rods. "Dia-Fliese-perfect" is mounted on top of conventional dressing plates MK1/MK0 or can be brazed unto brackets. Horst Lach also describes the second innovation – the PCD solid drill with inner exhausting – as extremely noteworthy and he has already filed a patent for it. "I am surprised nobody else had this idea yet. Both, GRP and CFRP drilling procedures produce carcinogenic dust and chips. Now you can catch those immediately. This is the kind of system professional associations will request. "Our system is ideal for the aviation industry", says Horst Lach. Lach Diamant already developed a whole assortment of different products for this purpose:

**Horst Lach:**  
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Solid drills with inner exhausting are already available in sizes from 20 to 85mm radius. In addition, core and hollow drills with inner exhausting are available up to 200 mm radius. Hollow drills are manufactured up to 300 mm length. "These drills can be used for any type of plastics".

**"No other manufacturer is more advanced in GRP and CFRP"**

Lach Diamant gained experience especially in the aviation industry: "We are responsible for all Airbus rivets, and started to develop new drills 30 years ago. Today, these new drills have become integral tools in the aviation industry". Very early on in the development, drill holes had to be certified, Horst Lach recalls. Today, Lach Diamant would focus mainly on the automobile industry. That is where future designs will require new manufacturing techniques and tools. However, Dreamliner, A380 and 350 with typical material-combinations also provide new challenges. "Even milling such complex modules is something we know how to do; some procedures are already filed for patent. There are no other manufacturers who could compete with our advanced CFRP and GRP solutions. We have all the top-notch processing technologies". Lach Diamant invested only recently 3.5 million Euro for new machines in our production plant in Saxony. "Our family-owned company is still manageable. We have 180 employees – including our US subsidiary, where we manufacture machining tools for wood and metal, an equally demanding endeavor as manufacturing tools for composite materials".

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