

GRINDING & SURFACE FINISHING

Grinding Wheels & Discs

Diamonds are forever

Diamonds are not only "a girl's best friend" but play an important role for wear protection and guarantee maximum precision and overall equipment efficiency (OEE) for machine tools in serial production, especially when referring to polycrystalline diamond (PCD) which is an almost indestructible "all-rounder" due to its hardness.

The decision to use polycrystalline diamonds, not only for the machining of non-ferrous metals but also for wear protection, goes back to the year 1973 and the world's first LACH DIAMANT made PCD tools for the turning of copper commutators.

The possibility of using them in serial production raised the question of how the commutator spindles running on prisms during turning could be adapted to the new challenges with regard to tool life and guide accuracy.

The solution for industrial use was found in the hardest thing of all – the diamond.

This know-how became the basis of a broad range of applications for wear protection of different components in machine tools, centreless cylindrical grinding machines, for example prisms, bearing shells, centre points, steady rest blocks, sliding blocks, work rest blades, punching knives, and many other applications.



Several Components with PCD Wear Protection

The complete diamond dressing programme

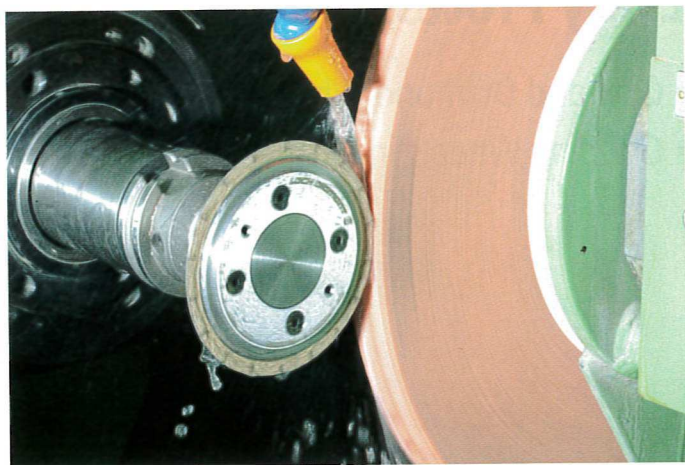
LACH DIAMANT presented at GrindTec a complete programme of diamond dressing tools and rolls for the precision dressing of all conventional dressing wheels.

Industrial diamonds, self-imported, with qualities matching specific demands, are set into the requested holders for machine mounting and delivered to customers with a service guarantee.

One-way diamond dressing tools such as the top-notch development »Dia-Fliese-perfect« or diamond multi-point dressers are other available alternatives.

A special highlight among dressing rolls is »drebojet-plus«, an alternative diamond roll for the path-controlled dressing/profiling of grinding wheels.

In addition, LACH DIAMANT offers expert service for resetting and regrinding of single-point dressing diamonds, polished profile diamonds and diamond chisels for Diaform devices in its own grinding department for natural diamonds.



The »drebojet-plus« profiling dressing roll in action

New: diamond and CBN profile grinding wheels

The technology of »contour-profiled«-profile grinding wheels is at the same time the comeback of metal binders for LACH diamond and CBN grinding wheels.

Synthetic resin bond grinding wheels need up to three processing steps during the deep grinding of carbides, high-alloyed and ceramic components. The new metal bond »contour-profiled« profile grinding wheel now accomplishes this in one single step.

Almost every profile type, concave or convex, is possible, even with the smallest tolerances of up to 0.005 mm.

Costs for abrasives and wheels could be reduced by a factor of eight as one single profiled »contour-profiled« grinding wheel is sufficient for all so-far necessary set of wheels. Tool life is now up to 25 times longer, for example for solid carbide thread inserts.

The »contour-profiled« wheels achieve up to 35 to 60 percent time savings through higher feed rates per workpiece.

Compared to other machining methods, the LACH DIAMANT technology guarantees an almost 100 percent restoration of the original profile. Profile deviations are also excluded during service.



Three in one: »contour-profiled« diamond and CBN profile grinding wheels, the new technology for drastic cost cuttings during serial production

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