



November 12, 2020

**»CBN-Duo-power« – „Turning instead of grinding“  
Turning hardened steel with newly developed CBN-inserts**



Already in 1974 the diamond tool manufacturer in Hanau achieved a technological breakthrough in machining hardened steels with a hardness starting from 58-60 Rockwell (HRc).

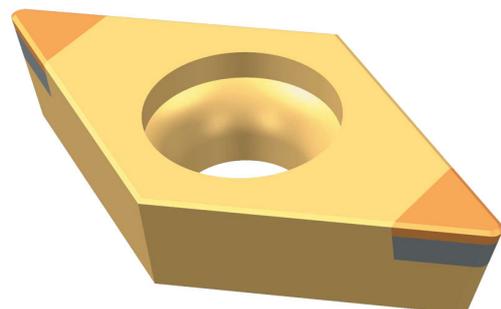
This was made possible through the development of polycrystalline cutting materials on the basis of cubic boron nitride (CBN).

CBN – even though inferior to diamond in regards to hardness – features a significantly higher thermal stability than diamond (diamond = approx. 700°C / CBN = approx. 1500°C) ; the reason being that the spark (1000°C) which emerges during steel machining would quickly melt (diffuse) the diamond that consists of carbon.

Until the discovery of polycrystalline CBN cutting materials, hardened steel could only be machined by laborious and time-consuming grinding processes. The slogan „turning instead of grinding“ which was characterised by LACH DIAMANT already in 1974, was a technological sensation even at that time. Long hours of grinding were reduced to a few minutes of turning!

Now, LACH DIAMANT doubles this efficiency by offering an insert with 2 tips: »CBN-Duo-power«.

The development of new CBN cutting materials like the types B610 and B600 used



by LACH DIAMANT met the demand of the automotive and component industry for a cutting material with long-term stability for the turning of hardened steels – and this with highest surface qualities of e.g. Ra 0,1  $\mu\text{m}$ .

»CBN-Duo-power« inserts type B610 or rather B600 are especially recommended for finish turning:

- with interrupted and continuous cut especially in tool steels and case-hardened steels as well as powder-metal alloys
- of components like gears, cardan shafts, valves, belt pulleys and even of brake discs and brake linings and for turning sprayed metal alloys etc.

You can find further information on the LACH DIAMANT »Duo-power« programme „turning instead of grinding“ online at [www.lach-diamant.de](http://www.lach-diamant.de) or during a personal consultation on our direct line +49 6181 103 950.

Even in times like these, LACH DIAMANT will continue to support all customers with reliable delivery capability of the entire diamond and CBN programme; of course, this includes all service works on self-produced, as well as external tools.

Enclosure:

Picture 1: CBN hard turning with »CBN-Duo-power« „turning instead of grinding“

Picture 2: example CBN-Duo-power ISO-Type DCGW

**LACH DIAMANT Jakob Lach GmbH & Co. KG**

**Donaustr. 17 D-63452 Hanau . Tel. +49 6181 103822 Fax +49 6181 103860**

**email: [office@lach-diamant.de](mailto:office@lach-diamant.de) [www.lach-diamant.de](http://www.lach-diamant.de)**