**Binderless Polycrystalline Diamond**

Since binderless polycrystalline diamond (BLPCD) has no macro cleavage planes and highest hardness, it is desirable material for micro milling tools. However, fabricating micro tools made of BLPCD by conventional method such as grinding is very time consuming due to its extremely high hardness.

**LMJ used for:**
- Cutting PCD discs

**Replacing time- and tool-consuming grinding by maintaining the quality**

Binderless PCD cannot be EDM-cut, only by grinding, which is very slow.

**Main processing criteria:**
- No post-treatment
- No HAZ
- No micro cracks
- No burrs
- Perfect verticality
- Narrow tolerances
- Low roughness

**Machining technologies able to reach these criteria:**
- Grinding
- Laser MicroJet (LMJ) - water jet guided laser technology

**SOLUTION**

**LMJ advantages versus EDM or grinding:**
- No need of conductivity
- Much faster process
- Low consumables
- High flexibility

**Installed machine type:**
- 3 x LCS 150
- 100 W green laser