



## **GENIS 2 LW**

Vitrified bonded CBN grinding wheel with lightweight core  
for external cylindrical grinding

# GENIS 2 LW

With the GENIS 2 LW product line, TYROLIT is a pioneer and technology leader in the area of lightweight vitrified-bonded grinding tools. Through targeted material reduction, the wheel weight has been significantly reduced. The stock removal rate at the core is not random, but is calculated using a computational FEM analysis (Finite Element Method). This means that deformations and potential performance losses can be excluded. Through use of the lightweight GENIS 2 LW version, the maintenance intervals at the grinding machines can be reduced and handling significantly simplified for personnel in production.

**+ Weight optimisation:** Tools determine less wear on spindles and bearings than comparable reference tools. Moreover, significant advantages arise during transport and fitting of the tools. A patent has been applied for with regard to this innovation.

**+ Replating-compatible:** GENIS 2 LW tools can be replated problem-free, therefore the slightly higher purchase price of the core can be compensated quickly. Additionally, LW-cores are significantly cheaper than CF-cores (carbon fiber).



**Application:** External cylindrical grinding of crankshafts



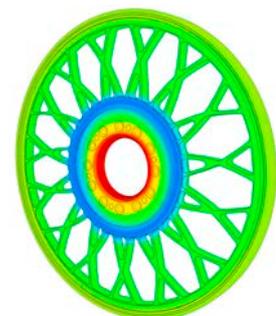
**+ Maximum tool life:** GENIS 2 LW tools provide the customary top performance of the proven GENIS product lines. Thanks to the weight reduction, tool life increases are often possible as a side-effect, e.g. due to a reduction in vibration.

**+ Computational FEM simulation:** Each lightweight version is optimally designed for the requirements at hand with the aid of a computational FEM simulation. This allows maximum weight reductions to be achieved without sacrificing on performance.

## Example application

Bearing-finishing of a large crankshaft  
GENIS 2 LW 1000 x 52 x 202,94mm

Weight reduction of 55%



FEM simulation of a grinding wheel