



GENIS 2 N-LW

Vitrified bonded CBN grinding tools with natural fibre-reinforced core for external cylindrical grinding

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TYROLIT is setting new standards for external cylindrical grinding using ceramic CBN with the GENIS 2 N-LW product line. The extremely low density of the patented core material N-LW delivers significant weight savings. GENIS 2 N-LW tools are lighter and most of all less expensive than comparable tools with a CFRP core. The products can be approved for wheel peripheral speeds of up to 140 m/s. The material has excellent damping behaviour and is designed with a high-precision steel mounting in the bore area. This means that GENIS 2 N-LW cores can be replated a number of times and used in production.

Application:
GENIS 2 N-LW grinding a knee implant



+ Significant weight reduction:
The extremely low density of the natural fibre core greatly reduces the weight of the grinding wheel compared to other materials. This makes them much easier to handle in production, reduces set-up costs and increases the lifetime of the grinding spindle.

+ Damping properties:
As with CFRP cores, the N-LW technology has damping properties, which means it has a positive influence on the grinding result with respect to waviness, roughness and surface flaws.

+ Wide range of applications:
GENIS 2 N-LW tools are produced individually according to customer requirements. The universally usable N-LW technology is ideally suited to wide grinding wheels in centreless applications as well as to small tools in medical technology.



+ Approved for 140 m/s:
GENIS 2 N-LW tools are approved for wheel peripheral speeds of up to 140 m/s. This makes them suitable for all common grinding applications in the market.

Weight comparison of different core types

Vitrified CBN grinding tool 700 × 47 × 159,94 mm for machining crankshafts

The grinding wheel with N-LW core technology is **76% lighter** than a comparable tool with steel core

N-LW TECHNOLOGY*	Density 1,38 g/cm ³	23 kg
CFRP*	Density 1,60 g/cm ³	30 kg
STEEL LIGHTWEIGHT	Density 7,85 g/cm ³	56 kg
STEEL	Density 7,85 g/cm ³	94 kg

* Bore area with steel hub