



**POLARIS BASIC / POLARIS PLUS**  
ELECTROPLATED CBN GRINDING TOOLS FOR  
EXTERNAL PLUNGE CUT GRINDING

A Company of the SWAROVSKI Group  
[www.tyrolit.com](http://www.tyrolit.com)

**TYROLIT**

# POLARIS BASIC / POLARIS PLUS

With its POLARIS product line, TYROLIT is the market and technology leader in the production of galvanic bonded grinding tools. Cutting-edge production equipment, manufacturing know-how and application expertise are essential for maximum tool lives. Even the smallest amount of axial and radial run out or the slightest imbalance can reduce the service life of the tool. Additionally with the POLARIS PLUS variant, the zones with the highest levels of tool wear can be specifically reinforced, extending the life of the grinding wheel even further.

## Application

External cylindrical grinding of valves, gear shafts and engine shafts



**+ Individual production:** POLARIS grinding tools are individually designed and constructed in accordance with the intended grinding application and component requirements – every POLARIS tool is one of a kind.

**+ Maximum lifetimes:** Through targeted layer treatment, the zones with the highest levels of tool wear can be influenced to significantly extend the tool's service life.

**+ Replating-compatible:** POLARIS grinding tools can be reused several times by applying a new abrasive layer.



## + Maximum profile accuracy:

Thanks to the extremely precise production of the core, the CBN layer can be applied to the exact profile of the tool in a repeatable manner and without any impact on the stock removal rate.

## + Constant optimisation:

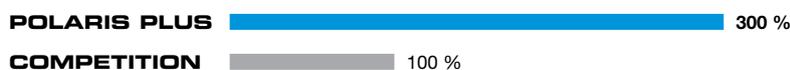
Experienced TYROLIT application engineers support our customers in the use of these high-precision tools and thus permanently reduce the machining time for each component while increasing process stability.

## Example of application

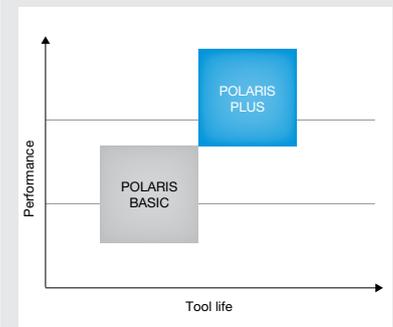
Flute plunge cut grinding of gear shafts | TYROLIT POLARIS PLUS (B181G POL-P)  
**Tool life** increased by 68 %



Rough grinding of injection nozzles | TYROLIT POLARIS PLUS (B181G POL-P)  
**Tool life** increased by 300%



## POLARIS BASIC/PLUS



Compared to POLARIS BASIC, POLARIS PLUS delivers a longer tool life and higher performance.