

COLUMBIA

Vitrified bonded grinding tools for
internal cylindrical grinding

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COLUMBIA grinding wheels from TYROLIT bridge the technological gap between grinding tools made of fused aluminium oxide and superabrasives. For internal cylindrical grinding applications, in particular, these products of specially bonded sintered aluminium oxide develop their full potential and make possible previously unparalleled levels of performance. This is true of both small and large component dimensions and for various steel materials and hardening processes.

Application
Grinding of bores and tracks



+ High quality of the ground rings:
COLUMBIA reduces the grinding forces and enhances the cool grinding behaviour. Even with enhanced stock removal rates and significantly longer dressing intervals the high quality standards can still be achieved.

+ Optimised economic efficiency:
Reduced grinding cycle times, longer dressing intervals and low non-productive times represent optimisation potential. As internal cylindrical grinding applications are often bottleneck operations, COLUMBIA grinding wheels enable particularly high savings.



+ Maximum process stability: Large stock removal fluctuations can also be compensated for by the COLUMBIA grinding wheel. The components to be ground can thus be manufactured with a consistent level of process stability.

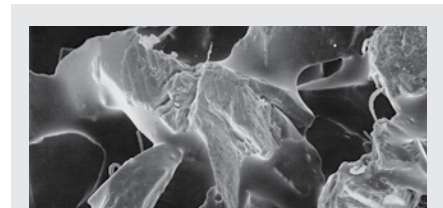
Example of application

Internal grinding of ball bearings 6207
TYROLIT COLUMBIA 1 28x17x10 AH120L6VCOL 80

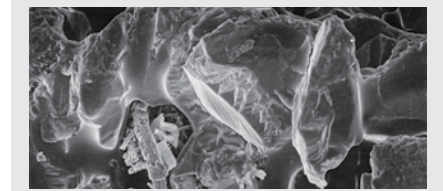
Grinding cycle time reduced by 30%



6.6x increase in lifetime



Homogenous grain abrasion with COLUMBIA



Arbitrary grain break-out with fused aluminium oxide

Only specially bonded sintered aluminium oxide forms defined cutting edges in the grinding process. With COLUMBIA grinding wheels, the wheel wear is primarily due to homogenous grain abrasion and not arbitrary grain break-out as with fused aluminium oxide.