



## **CSS ULTRA**

High performance grinding tools for  
external cylindrical grinding and thread grinding

# CSS ULTRA

With the CSS ULTRA product line, TYROLIT has created a sustainable grinding wheel micro-architecture through the use of new, high-quality components and innovative sintering technology. In addition to thermal load, particularly high wearing forces affect the grain and bond during high performance grinding processes. Furthermore, the boundary layer between both components becomes heavily eroded due to the increased stock removal rate. Thanks to the innovative bond system, a significant increase in grinding performance is possible.

**Application:** External cylindrical grinding of automotive components.



**+ Long lifetime / good profile retention:** Due to the high-strength bond system, the abrasive grain can withstand much greater loads during use without breaking away prematurely.

**+ Cool grinding (no burning)**  
The high-strength bond system enables specifications with reduced bond content and therefore less friction in the grinding process.



**+ Shorter grinding time / higher productivity:** With CSS ULTRA, the stock removal rate can be increased without impairment of workpiece quality.

**+ Approved up to 125 m/s**  
High-strength bond system is ideally suited for high speed grinding. With CSS ULTRA, peripheral speeds of up to 125 m/s can be achieved.

## Example of application

## Typical components

**Bearing industry:** Grooved ball bearing inner ring 6206 – grinding of race  
CSS ULTRA 1LB 610x17x304,8 CS66A120HH3VB1 80

inner ring  
outer ring  
spherical roller  
cylindrical roller

Reduction of grinding time by 30%



**Tool manufacturing industry:** Taps – thread grinding  
CSS ULTRA 1GEW 400x25x160 CS33A240HH3VB1 80

tap  
thread former

Reduction of dressing amount by 30%



**Automotive industry:** Crankshaft – grinding of bearing journal  
CSS ULTRA 1KN 1065x40x305 CS33A541KK6VB1 50

crankshaft  
camshaft  
gear shaft  
CV joint  
fuel injection components

Increase in lifetime by 50%



## Innovative bond system

Surface structure of CSS ULTRA in conjunction with a grit mixture made from white and sintered aluminium oxide



Surface structure of CSS ULTRA

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