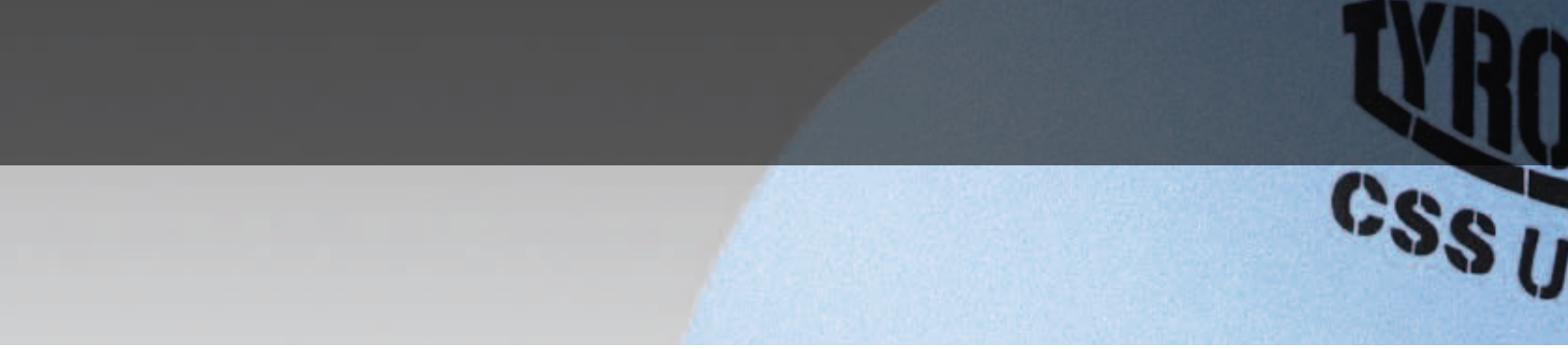
CSS ULTRA

HIGH PERFORMANCE GRINDING WHEELS FOR OD & THREAD GRINDING

- Increase productivity and lower grinding costs
- Reduce grinding times
- High performance with cutting speeds up to 125m/s

TYROLIT

A Company of the SWAROVSKI Group



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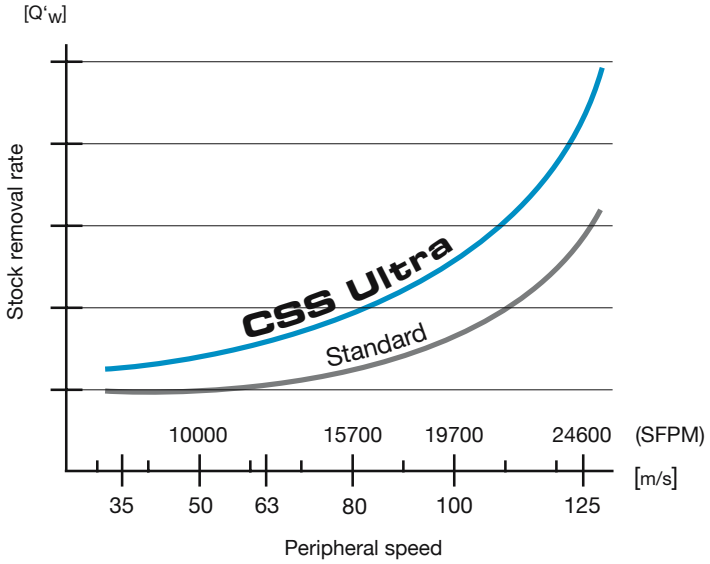
HIGH PERFORMANCE GRINDING WHEELS FOR OD & THREAD GRINDING

During high performance grinding processes there is a build up of heat in the grinding area. Increasing wear forces constantly weaken grain and bond structure. Due to increased stock removal volume, the boundary layer between both these components is heavily eroded.

With CSS ULTRA, TYROLIT improves grinding performance by restructuring the micro architecture of the grinding wheel. This has been achieved by using high quality materials together with an innovative sintering technology. This enables the abrasive grain to withstand much greater loads when in use, without breaking down prematurely.

When CSS ULTRA is used in External Cylindrical grinding applications, maximum profile retention combined with minimum wheel wear is achieved.



Product Benefits

- Less wear
- Optimum profile retention
- Cooler ground section (no burning)
- High product quality
- Can be used universally
- High cutting ability

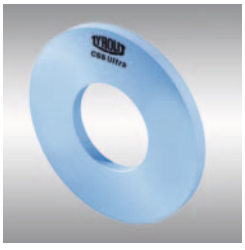
Application Benefits

- Higher productivity / efficiency
- Shorter grind times
- Reduced dressing requirements
- Lower grinding costs
- Quiet, even grinding process
- Highest process stability

Main Application Areas

- Crankshafts
- Camshafts

- CV joints
- Drive shafts



- Track inner rings
- Flange inner rings

- Nozzle pins
- Cylindrical rollers

- Taps
- Cold forming taps

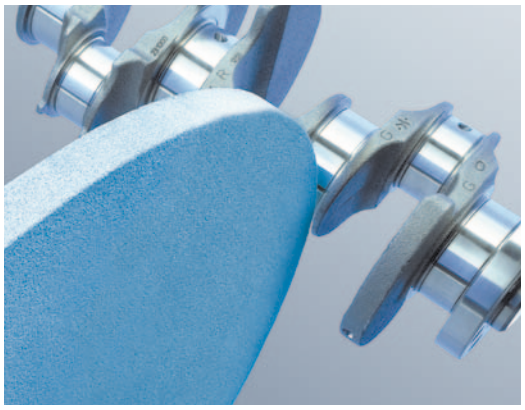
Dressing

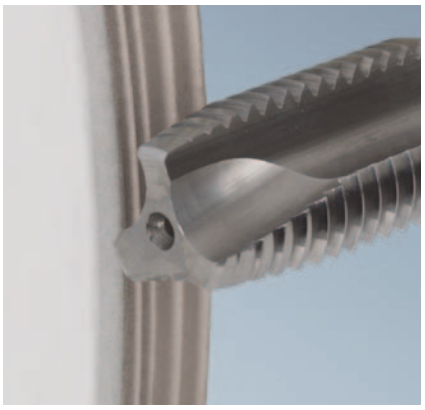
High performance grinding wheels increase demands on dressing tools. As a system supplier, TYROLIT offers a complete range of stationary and rotary dressing tools.

CBN and CSS ULTRA

CSS ULTRA is the optimum tool, which allows a combination with vitrified or electroplated CBN grinding wheels.

CSS ULTRA
APPLICATION EXAMPLES



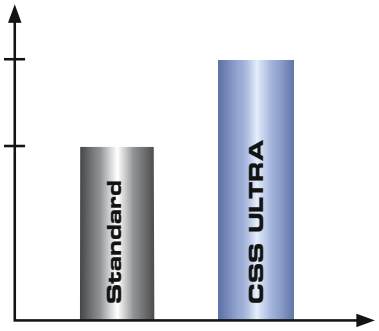


Part	Crankshaft main bearing
Material	C38MOD
Hardness	58 - 62 HRC
Machine	Naxos
Peripheral speed	50 m/s or 9850 SFPM
Grinding Coolant	Emulsion
Dressing amount	0.04 mm
Dressing cycle bearings	2
Shape & dimensions	1KN - 1065 x 40 x 305 T1 - 42 x 1.575 x 12
Specification	CS33A 541 KK6 VB1

Tap – Thread
HSS-PM M6
60 - 62 HRC
Reishauer RGB
75 m/s or 14775 SFPM
Oil
0.01 mm
1
1GEW - 400 x 25 x 160 T1 - 15.750 x 1 x 6.300
CS33A 240 HH3 VB1

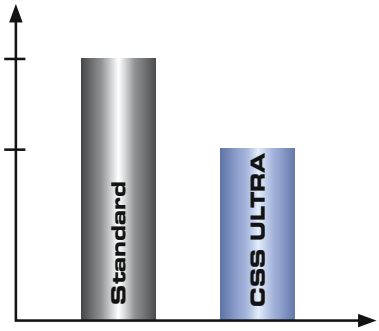
Ball bearing – inner ring
100Cr6
58 - 62 HRC
Eigenbau
80 m/s or 15760 SFPM
Emulsion
0.008 mm
30
1LB - 610 x 25 x 304.8 T1 - 24 x 1 x 12
CS66A 120 HH3 VB1

Results



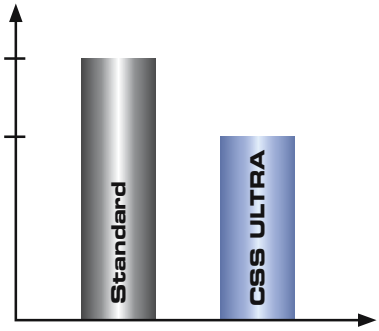
Increased output 50%

Results



Dressing reduced 30% with a 15% savings in grind time

Results



Reduced grind time 30%

Service

Our technical field sales team and our application engineers are glad to help you make the most of your grinding process.

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