



STRATO ULTRA

A NEW FORCE IN SURFACE GRINDING AND
CREEP FEED GRINDING

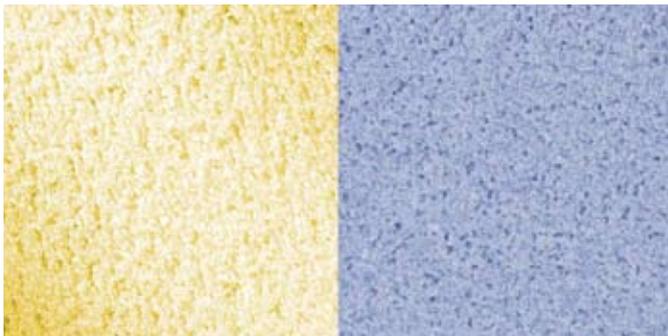
- Reduced grinding times
- Significantly better profile retention
- Cool grinding
- Increased wheel life

STRATO ULTRA

A NEW FORCE IN SURFACE AND CREEP FEED GRINDING

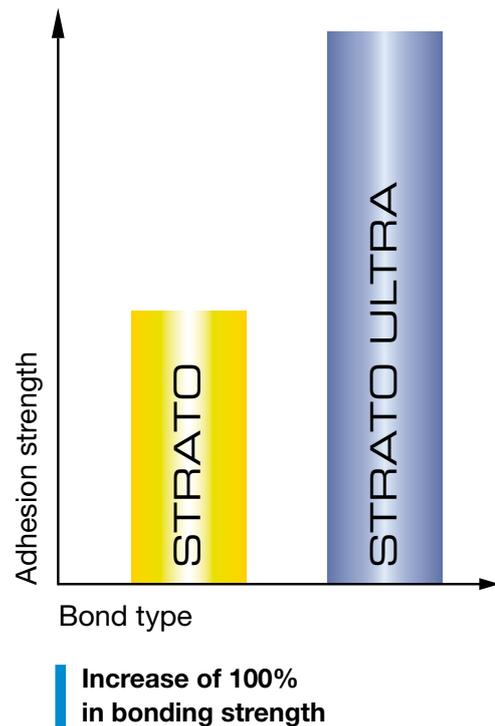
TYROLIT excels through innovation

TYROLIT is the market and technology leader in the field of high-porosity grinding wheels for creep feed grinding. With the STRATO product line, TYROLIT is setting new standards of quality and performance. It has now launched STRATO ULTRA, representing the next generation of surface and creep feed grinding tools.



STRATO

STRATO ULTRA



STRATO ULTRA does the job of more expensive tools

Particularly in the turbine industry, STRATO ULTRA can be used instead of grinding tools with expensive sintered aluminium oxides without sacrificing performance. Sintered aluminium oxide reacts very aggressively to the dressing tool and consequently generates increased diamond wear.

STRATO ULTRA saves money twice over:

- through lower grinding costs
- through longer service of the dressing tool

Advantages of STRATO Ultra

- Reduced grinding times
- Significantly better profile retention
- Cooler grinding
- Increased wheel life
- Approved up to 63 m/s

Large pore space allows cool grinding

Particularly during creep feed grinding, large contact surfaces and high cutting performances generate large amounts of grinding energy (heat). The high-porosity STRATO ULTRA bond system allows better absorption of cooling lubricant and grinding chips. The result: measurably improved component quality thanks to increased profile retention and cooler grinding.

Available sizes	
External diameter	100 to 750 mm
Wheel width	10 to 250 mm

STRATO ULTRA

PRE-PROFILING REDUCES DRESSING COSTS



Strato Ultra with edge profile

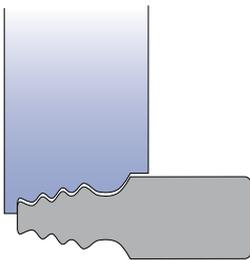


Strato Ultra with customised pre-profiling

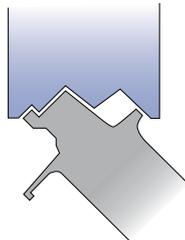
TYROLIT offers its customers profiled grinding tools. Depending on the profile depth, simple edge profiles and customised pre-profiling can significantly reduce set-up times and associated dressing tool wear.

TYPICAL COMPONENT APPLICATIONS

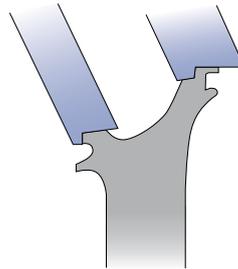
STRATO ULTRA can be used universally and can be specified for all common applications and machine types.



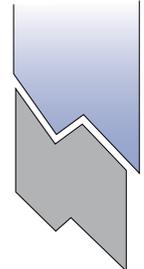
Turbine rotor vane
Fir-tree profile



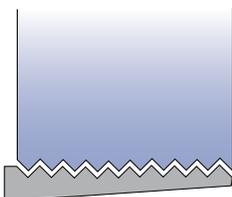
Turbine stator vane
Round profile



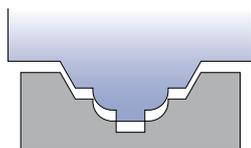
Turbine rotor vane
External profile



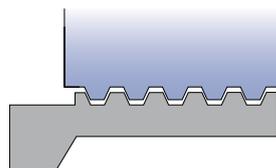
Turbine rotor vane
Z profile



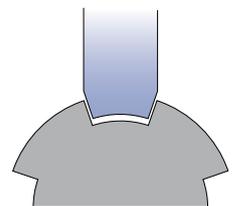
Saw blade
Tooth profile



Guide rail
Running surface



Thread profile
Transmission



Hub profile
Groove

STRATO ULTRA

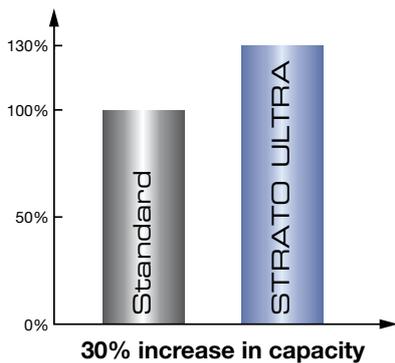
EXAMPLES OF APPLICATIONS



NGV, aircraft turbine

Material	Nickel-base alloy
Machine	ELB
Dressing	CD (Continuous Dressing)
Operating speed	15 - 50 m/s depending on process stage
Feed	1000 - 4000 mm/min
Cooling lubricant	Emulsion
Wheel dimensions	450x80x203.2
STRATO ULTRA	SU33A802HH11VB01
Results	<ul style="list-style-type: none"> — 30% increase in capacity — 25% more components per grinding wheel — Annual saving on process costs: EUR 150,000 — 4x longer service life of roller dresser
Action plan	<ul style="list-style-type: none"> — Optimise grinding and dressing process with TYROLIT — Use STRATO ULTRA

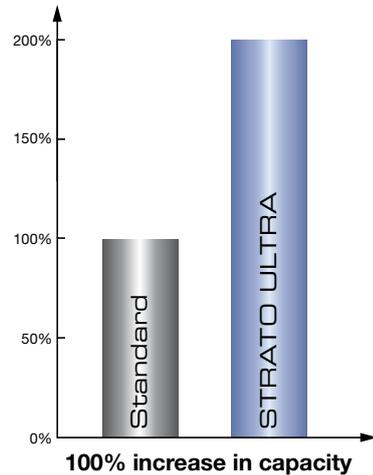
Result



Fir-tree profile, stationary turbine

Material	Nickel-base alloy
Machine	Blohm
Dressing	CD (Continuous Dressing)
Operating speed	12 - 35 m/s depending on process stage
Feed	180 - 2000 mm/min
Cooling lubricant	Emulsion
Wheel dimensions	500x95x203.2
STRATO ULTRA	SU33A542GG12VB01
Results	<ul style="list-style-type: none"> — 100% increase in production capacity — 20% more components per grinding wheel — Grinding time reduced by 60% — Cuts reduced from 12 to 10 — Annual saving on process costs: EUR 75,000
Action plan	<ul style="list-style-type: none"> — Optimise grinding and dressing process with TYROLIT — Use STRATO ULTRA

Result



STRATO ULTRA AND TYROLIT DIAMOND ROLLER DRESSERS EXPERTISE IN TECHNOLOGY AND QUALITY

A complete grinding system from a single source

The function of a profile roller dresser is to achieve a geometric profile and the desired wheel topography. The coordinated system of the TYROLIT diamond profile roller dresser with the corresponding grinding tool reduces thermal stress on the workpiece and so enables you to achieve optimum grinding results.

Broad field of application

TYROLIT diamond profile roller dressers are used mainly in the turbine, automobile and tool manufacturing industries.

TYROLIT diamond profile roller dressers are ideal for the following grinding processes:

- CD / non CD (Continuous Dressing)
- HSCD (High Speed Continuous Dressing)
- IPD (In Process Dressing)
- High-speed pendulum grinding

Advantages when dressing with diamond profile roller dressers:

- High profile accuracy
- Reduced dressing costs
- Long service life



The TYROLIT factory in Neuenrade, Germany, was expanded in 2008 to include a production facility for diamond profile roller dressers. The high level of training and long-standing experience of our staff in the manufacture of precision tools guarantee expert advice and ensure that the grinding system will be professionally matched to the process.

Thanks to the latest manufacturing, processing and measuring techniques, we are able to guarantee the highest quality and precision. The shortest lead times and speedy, unbureaucratic attention to customer requests round off the service offering of this production unit.

TYROLIT SCHLEIFMITTELWERKE SWAROVSKI K.G.

Swarovskistraße 33 | 6130 Schwaz | Austria
Tel +43 5242 606-0 | Fax +43 5242 63398

Our **worldwide subsidiary companies** can be found on
our website at www.tyrolit.com

