STRATO ULTRA
CERAMIC BONDED GRINDING TOOLS FOR SURFACE AND CREEP FEED GRINDING

A Company of the SWAROVSKI Group
www.tyrolit.com
STRATO ULTRA

TYROLIT is setting new standards for surface and creep feed grinding with the STRATO ULTRA product line. The highly porous bond system replaces expensive sintered aluminium oxide without sacrificing performance. Improved component quality is delivered through the increased profile retention and exceptionally cool grinding. Thanks to reduced diamond wear on the dressing tool combined with reduced pre-profiling times, TYROLIT offers a cost-effective solution in the turbine industry that delivers the accustomed high-quality results.

**Increased lifetime:** Large pore spaces, a special bonding matrix and optimised grain distance reduce the radial wear as well as the dressing amounts. This dramatically increases the tool lifetime.

**Cool grinding:** The highly porous bond system improves the take up of cooling lubricants and grinding chips and thus reduces heat generation on the workpiece.

### Example application

Grinding of a turbine stator vane for a stationary turbine

TYROLIT STRATO ULTRA SU33A60GG11 VB1

- **Increased lifetime:** Large pore spaces, a special bonding matrix and optimised grain distance reduce the radial wear as well as the dressing amounts. This dramatically increases the tool lifetime.
- **Cool grinding:** The highly porous bond system improves the take up of cooling lubricants and grinding chips and thus reduces heat generation on the workpiece.
- **Shorter grinding time:** The improved STRATO ULTRA bond system properties significantly increase the stock removal rate compared to grinding wheels already on the market.
- **Approved for up to 63 m/s:** The newly developed, exceptionally strong and stable STRATO ULTRA bond matrix enables operating speeds of up to 63 m/s.

### Innovative bond system

- Large pore spaces
- Strong and stable bond matrix
- Optimised grain distance

### Surface structure of STRATO ULTRA

**Application**

Creep feed grinding of turbine components

**Innovative bond system**

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**Example application**

Grinding of a turbine stator vane for a stationary turbine

TYROLIT STRATO ULTRA SU33A60GG11 VB1

- **200% increase in stock removal rate Q'w**
  - STRATO ULTRA: 15 mm³/mm
  - COMPETITION: 5 mm³/mm

- **33% reduction in grinding time** per component
  - STRATO ULTRA: 30 min
  - COMPETITION: 45 min

- **Lifetime increased by more than 100%**
  - STRATO ULTRA: 7 components
  - COMPETITION: 3 components