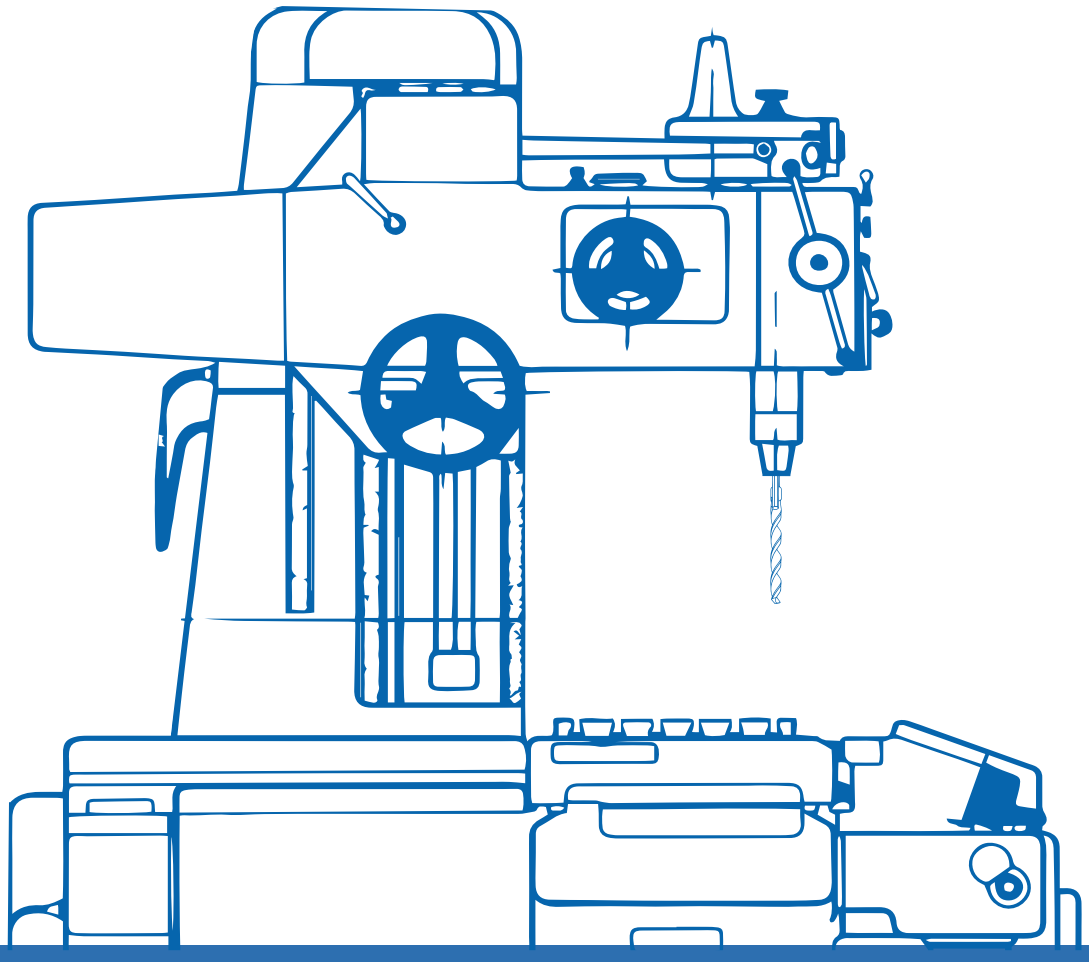
ABRASIVE SOLUTIONS

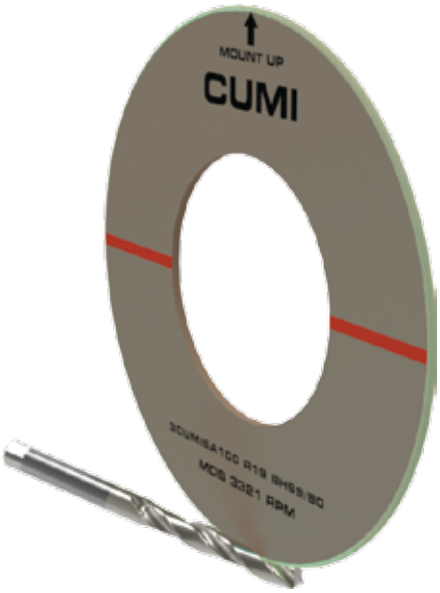


CUTTING TOOLS INDUSTRY

Flute Grinding Wheel for Cutting Tools

Flute grinding is a vital process in the production of cutting tools such as drills, end mills and taps. It shapes and refines the helical grooves, or flutes, which are critical for efficient chip evacuation, enhanced cutting performance and reduced heat generation.

With advanced manufacturing expertise, CUMI's Flute Grinding wheels, engineered with high-density, near-zero porosity resin bonds, set new standards in grinding. These wheels provide exceptional precision, flawless finishes, and consistent performance, ensuring superior results in cutting tool production.



Key Features

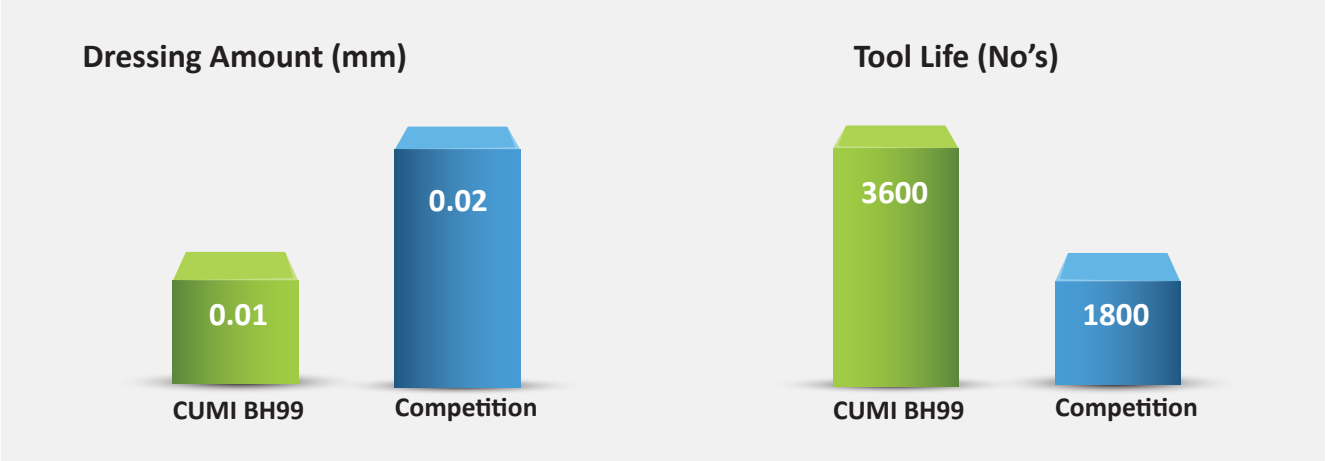
- Microcrystalline grains ensure higher stock removal with reduced cutting energy.
- Self-sharpening fractured grains maintain consistent performance.
- Optimized grain surface enhances adhesion to the bond, improving form retention and reducing wear.
- New bond system delivers cooler, burn-free cutting.
- High-density manufacturing process maximizes wheel performance.

Advantages & Benefits

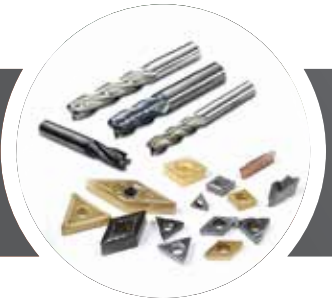
- Smoke-free grinding for cleaner operations.
- Enhanced form retention ensures consistent results.
- Extended wheel life for reduced replacement frequency.
- Higher material removal rate (MRR) for improved productivity.
- Superior surface finish quality for optimal performance.

Product Range

Grain Type	Grit Size	Dia - mm	Thickness - mm	Hardness	Structure	Bond	Wheel Speed
A/DA/55A/CSA	80 - 150	200 - 450	4 - 25	Q - R	19 - 25	BH99	80 m/sec



CUTTING TOOLS INDUSTRY



Thread Grinding Wheels for Cutting Tools

Cutting tool taps are used in machining to create precise internal threads in metals or other materials, essential for assembling parts like fasteners and machinery. Tap grinding sharpens and maintains these tools to ensure accurate thread profiles.

CUMI's Thread Grinding Wheels are engineered for precision, offering excellent form retention and consistent performance. Ideal for high-speed, high-material removal applications, they deliver accurate results while maintaining stringent thread profile specifications.

Key Features

- High-performance Aluminum Oxide grains for enhanced cutting efficiency.
- Precision Glassy bond for increased rigidity and stability.
- Fine grits designed to minimize wear and prolong wheel life.
- Wheels designed to operate at speeds up to 80 m/sec.

Advantages & Benefits

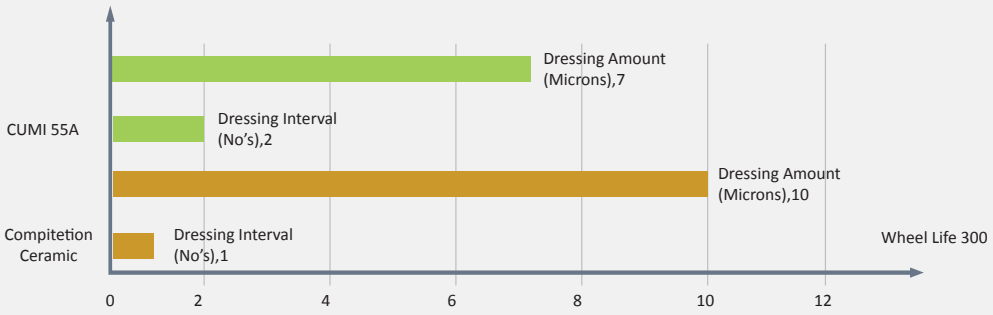
- Superior form retention for consistent grinding results.
- Low grinding forces for smoother, more efficient operations.
- Minimal thermal load, preventing burns and damage to taps.
- Reduced cycle time, improving overall operational efficiency.
- Extended wheel life, ensuring sustained performance over time.

Product Range

Grain Type	Grit Size	Dia - mm	Thickness - mm	Hardness	Structure	Bond	Wheel Speed
AA, 55A, MCA	120 - 400	300 - 500	10 - 50	I - N	4 - 9	Krystal	Upto 80m/sec

Performance Comparison

Case Study - Normac GT77 - M8X1.25pitch - 80m/s



CUTTING TOOLS INDUSTRY