



Wood Processing

Industrial Knives and Wear Components



Wood processing operations demand cutting tools and wear components that can withstand extreme abrasion, impact, and continuous duty production.

Through Zenith Cutter and MetKraft, Fisher Barton delivers engineered industrial knives and wear solutions purpose-built for wood chipping, brush clearing, tree care, and grinding applications. By combining application-specific tool steel and alloy selection, controlled heat treatment, precision manufacturing, and advanced wear-resistant surfaces, our solutions help tree care professionals and wood processors achieve consistent cut quality, extended service life, and reliable performance in the most demanding land-clearing and biomass environments.

Common Wood Processing Components That Fail from Wear

OEMs and operators frequently experience premature failure due to the combined effects of abrasion, impact, heat, and contamination:

Cutting & Reduction Systems

- Chipper and flaker knives – abrasive fiber wear, edge rounding, impact damage
- Brush and clearing knives – shock loading, fracture, accelerated edge loss
- Strand and wafer knives – resin buildup, abrasion, edge degradation

Support & Wear Surfaces

- Wear plates and liners – erosion from chips, strands, and debris
- Mounting interfaces – fretting, galling, and fatigue cracking

Many of these failures result from suboptimal steel selection, inconsistent heat treatment, or inadequate surface protection—areas where Zenith Cutter and MetKraft excel.

Metallurgy & Material Science: The Foundation of Cutting Performance

Cutting performance starts at the microstructural level. Zenith Cutter and MetKraft leverage **Fisher Barton's Technology Center** to engineer knives that balance hardness, toughness, and edge stability for wood and panel processing applications.

Capabilities include:

- Application specific steel selection for abrasion and impact resistance
- Controlled heat treatment for optimized hardness and toughness
- Microstructure refinement to reduce chipping and cracking
- Failure analysis to identify wear mechanisms and improvement opportunities

This science driven approach ensures cutting tools are engineered for real world production conditions—not just laboratory benchmarks.

Engineered Edges and Wear Resistant Surfaces

Wood and panel processing knives benefit significantly from engineered edges and surface enhancements. Zenith Cutter and MetKraft apply **advanced wear resistant technologies** to improve durability without sacrificing cutting efficiency.

Surface and edge solutions include:

- Wear resistant coatings for abrasion and erosion control
- Surface treatments to reduce friction and heat buildup
- Optimized edge geometries for strands, wafers, and chips
- Treatments designed to withstand resin rich environments

These enhancements are tailored to the application, material flow, and duty cycle.

Advanced Manufacturing Built for Continuous Duty Operations

Zenith Cutter and MetKraft operate within Fisher Barton's vertically integrated manufacturing ecosystem, enabling consistency from prototype through production.

Manufacturing capabilities include:

- Precision machining and grinding for repeatable edge geometry
- Laser and waterjet cutting for hardened and high strength materials
- Controlled heat treatment for consistent performance
- In house finishing and inspection
- Rapid prototyping and process validation

This integration supports reliability, scalability, and supply continuity.





Why Wood Processing, Arborist, and OEMs and Choose Zenith Cutter / MetKraft

- Proven expertise in industrial cutting and wear applications
- Metallurgy driven knife and wear component design
- Solutions for brush, chipper, strand, wafer, and OSB production
- Consistent manufacturing quality and repeatability
- Backed by Fisher Barton's engineering and materials expertise

Zenith Cutter / MetKraft is more than a knife supplier—we are an engineering partner delivering durable, high performance cutting solutions for the wood processing and engineered wood products industries.



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