

STABILO Step Blade

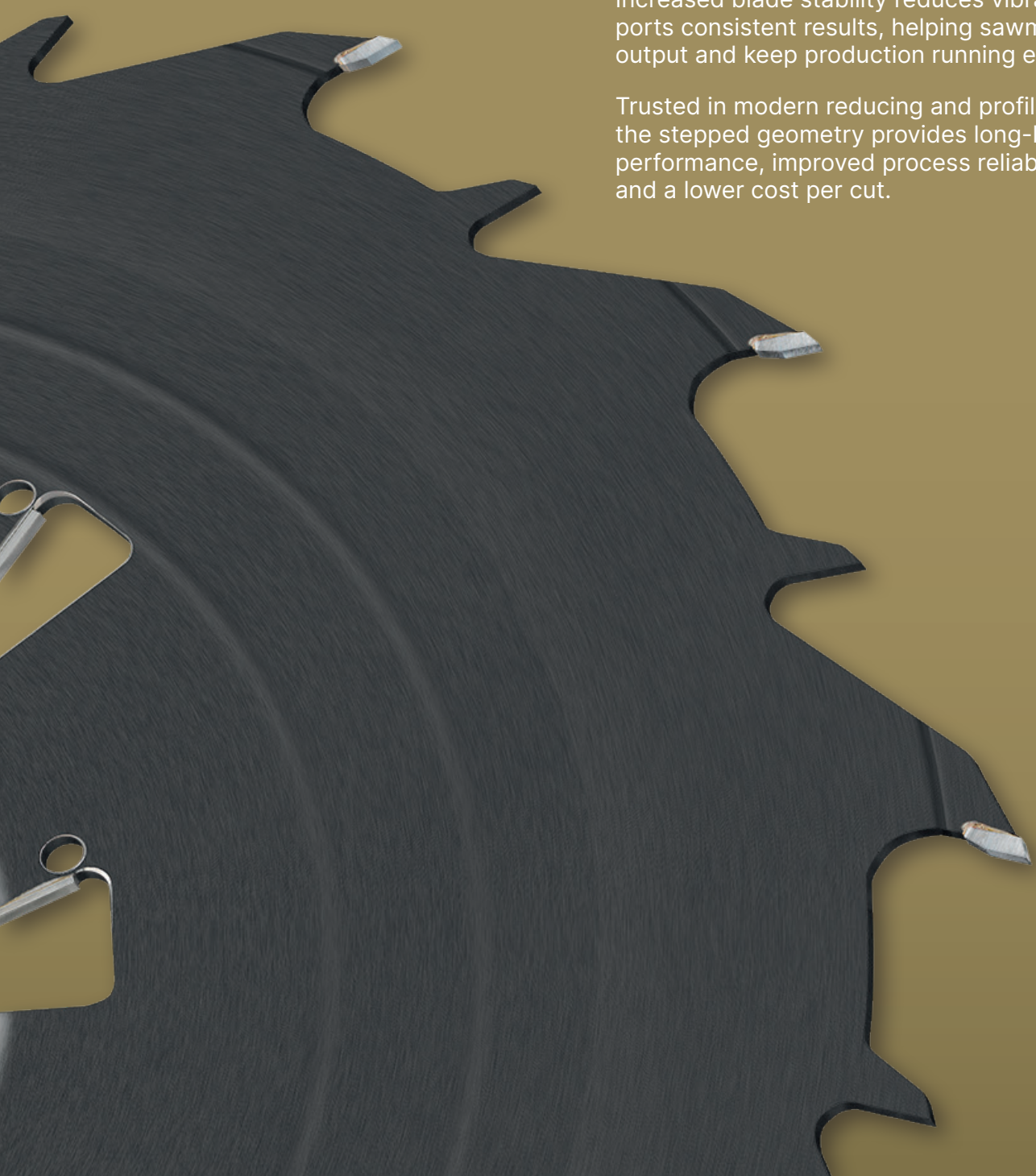
Stability by design. One step ahead.

Greater stability. Greater performance.

The graduated design delivers outstanding cutting performance with narrow kerfs, high feed speeds, and exceptional cutting accuracy.

Increased blade stability reduces vibration and supports consistent results, helping sawmills maximize output and keep production running efficiently.

Trusted in modern reducing and profiling lines, the stepped geometry provides long-lasting performance, improved process reliability, and a lower cost per cut.





Carefully selected carbide tips

Stays sharper longer by reducing cutting edge abrasion, improving cut quality and tool life.

Tri-Metal Brazing

Allows the carbide teeth to withstand high stress and impacts.

Graduated saw body

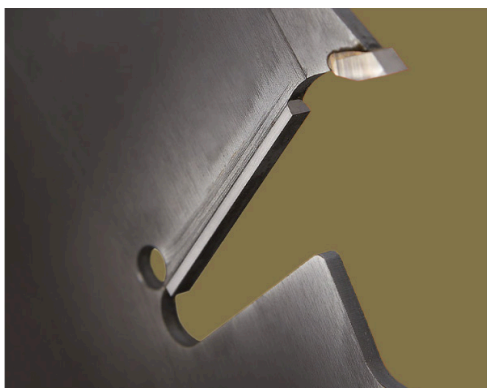
With the thinnest point of the stabilo sawblade being at the tooth area, the frictional heat generated by the sawdust here is reduced significantly. This factor is critical in stability and can be further enhanced by the coolcut option.

Optimized tooth geometry

Can be equipped with Plus-Thoot for effective chip ejection and improved chip break to reduce friction and heat.

Chip clearance slots facing

Stabilo can optionally be equipped with facing chip clearance slots, which protects the collar from excessive heating.



Our special geometry of the outer wiper slots ensures a good clean out of the sawtrack and significantly reduces heating of the sawbody.



Our special geometry of the inner strobes with the machined contour ensures a good clean out of the sawtrack and significantly reduces heating of the sawbody.

AST (Graduated Sawblade Technology) is HDS's proprietary saw body design, featuring a precisely graduated blade profile rather than a conventional constant-thickness body. By strategically varying the blade thickness across the saw body, AST places material where it contributes most to rigidity while minimizing material where it is not required. This advanced geometry delivers exceptional dynamic stability, allowing for thinner kerfs, increased feed speeds, and higher cutting performance without compromising running accuracy.

Technical Specification

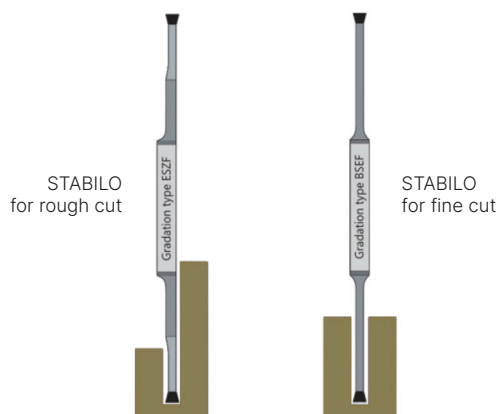
Parameter	Conventional Saw Blade	AST Graduated Saw Blade
Body geometry	Constant thickness	Variable / graduated thickness
Thickness distribution	Uniform across blade body	Optimized from collar to cutting zone
Dynamic rigidity	Standard	Significantly enhanced
Kerf capability	Limited by stability requirements	Reduced kerf without compromising stability
Feed speed potential	Standard	Increased productivity potential
Cutting forces	Higher	Reduced
Heat generation	Higher friction within cut	Reduced friction and heat build-up
Energy consumption	Standard	Lower power demand
Running stability	Good	Optimized for demanding cutting conditions
Service life	Conventional	Extended through robust body design and reconditioning capability

Engineering Principle

Design Feature	Functional Benefit
Graduated blade body thickness	Maximizes stiffness-to-weight ratio
Increased thickness in critical load zones	Improved resistance to vibration and lateral movement
Reduced thickness in cutting zones	Lower cutting resistance and energy demand
Optimized mass distribution	Reduced bearing loads and smoother operation
Custom graduation profiles	Design tailored to machine, cutting program, and application

Key Benefits

- Maximum stability during operation
- Reduced kerf width and improved lumber recovery
- Higher feed speeds and productivity
- Lower energy consumption
- Reduced thermal loading
- Exceptional running accuracy
- Long service life and multiple reconditioning cycles



CoolCut CC

CoolCut is an advanced cooling feature designed to reduce heat build-up in the saw blade during operation. By minimizing frictional heating in the cutting zone, CoolCut helps maintain blade stability, running accuracy, and cutting performance under demanding production conditions. Lower operating temperatures contribute to more stable blade behaviour and support consistent cutting results throughout the production cycle.



Technical Specification

Parameter	Standard Design	CoolCut Technology
Frictional heat build-up	Standard	Reduced
Saw body temperature	Higher	Lower
Thermal stability	Standard	Enhanced
Running consistency	Standard	Improved
Suitability for demanding cutting conditions	Good	Optimized
Integration	Conventional blade design	Available with AST designs

AST + CoolCut

Technology	Primary Purpose	Benefit
AST	Structural optimization	Higher dynamic rigidity and thin-kerf capability
CoolCut	Thermal optimization	Reduced heat generation and improved temperature control
AST + CoolCut	Stability + thermal control	Consistent performance in demanding sawmill operations

Conclusion & Results

MORE VALUE FROM EVERY LOG

+0.8%

YIELD IMPROVEMENT

Sell more from the same log input

Equivalent to 4,000 m³ of additional saleable timber per year, without increasing annual log input.

€800,000

Pot. annual value

SALES VALUE

+5-6%

FEED POTENTIAL

Create more capacity. Or buy back time.

Use the higher feed potential to increase output when demand exists or produce today's volume in fewer operating hours.

€1.25-1.50M

Pot. annual value

ESTIMATED CONTRIBUTION

What could improved recovery, higher throughput and lower energy demand mean for your sawmill?

The actual opportunity is validated using customer-specific operating data.

-5.6%

POWER DEMAND

Reduce energy cost in every cut.

Lower cutting resistance can reduce electricity consumption while maintaining the current production output.

€25,200

Based on €0,15/kWh

IN ENERGY SAVING

Business case for a 500,000 m³/year sawmill

FROM POTENTIAL TO VERIFIED VALUE

01 SHARE YOUR DATA

We start with your operation: production volume, product mix, operating hours, line constraints and energy costs.

02 TEST ON YOUR LINE

Run a controlled production trial to measure recovery, throughput, stability and energy demand.

03 VERIFY THE VALUE

Quantify the commercial impact and decide based on measured results before broader implementation.

MEASURED ON YOUR LINE. VERIFIED WITH YOUR DATA.

Let LSAB quantify the opportunity and validate the results through a controlled production trial.

*Business case: 500,000 m³ annual output, €200/m³ sales value, €50/m³ contribution, 500 kW average load, 6,000 operating hours/year and €0.15/kWh. Value cases represent different ways of capturing the potential of stepped blades and should not automatically be added together. Actual, sawmill specific, results must be verified through production testing together with LSAB.