Save up to 20% of your production costs by increasing your cutting speed

Cutting costs for 1,800 gears [€]

Benefit from the BALINIT ALTENSA high-performance coating
Contact us now!

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BALINIT ALTENSA
Speed pays off

The high-speed solution for productive gear cutting

Cutting Tools

BALINIT ALTENSA: because productivity, time and cost are the deciding factors

Gear cutting applications such as hobbing, gear shaping and bevel gear cutting must meet continually rising requirements: Shorter and shorter machining times are required in order for productivity to be increased while reducing costs at the same time. You can attain this goal by using the innovative high-speed coating solution BALINIT® ALTENSA from Oerlikon Balzers. With it, you will benefit from unique coating properties that allow for extremely fast cutting speeds and high temperatures, leading to huge productivity gains as well as cost efficiency. Be ahead of the times: take advantage of the many benefits offered by Oerlikon Balzers, a worldwide technological leader in the field of hard coating solutions.

Benefit from these coating properties

OPTIMIZED PERFORMANCE

Improved hot hardness	**Reduced wear at high cutting speed**
Increased abrasive wear resistance	**Reduced flank wear at moderate and high cutting speed** **Significant improvement for highest cutting speed conditions for all substrate materials (PM-HSS, MC90, carbide)**
Lower thermal conductivity	**Reduced thermal impact on tool substrate (especially for PM-HSS)**
Optimized oxidation resistance	**Longer tool life at dry cutting conditions and high cutting speed**

BALINIT® ALTENSA
Productivity gains, cost efficiency and substantial time savings

Application recommendations

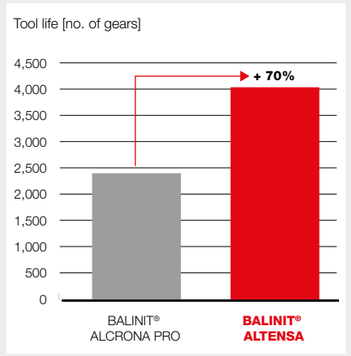
Bevel gear cutting

Hobbing

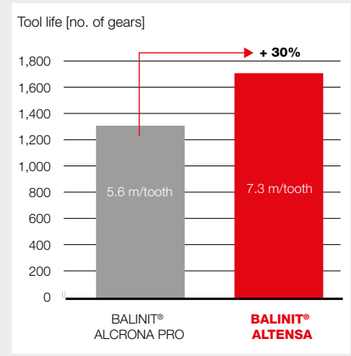
Gear shaping

BALINIT ALTENSA: maximum performance for hobs, stick blades and shaper cutters

PM-HSS hob:
+ 70% tool life
at high cutting speed

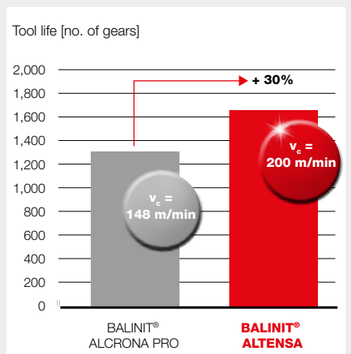


Carbide hob:
+30% tool life
at high cutting speed

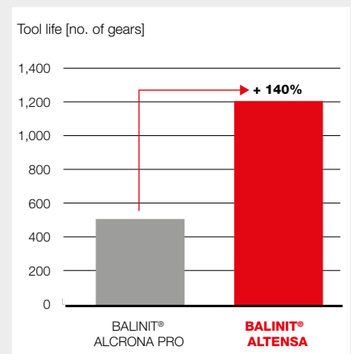


Tool	PM-HSS hob (S390) D= 70 mm	Carbide hob D = 90 mm
Workpiece	Gearbox for passenger car Steel 1.7131 (AISI 5115)	Gearbox for passenger car Steel 1.7149 (~AISI 5120, ~JIS SMnC420(H))
Cutting data	Cut 1: v_c = 200 Cut 2: v_c = 320 m_n = 1.52 dry	v_c= 480 m/min m_n = 2.6 f_a = 2.6 mm dry
Source	Automotive supplier France	Automotive supplier Germany

Stick blades:
longer tool life at 35%
increased cutting speed



Shaper cutter:
+140% tool life at
moderate cutting conditions



Tool	Carbide stick blades	PM-HSS shaper cutter D=130
Workpiece	Steel 1.7131 (AISI 5115)	Steel 1.7131 (AISI 5115)
Cutting data	v_c = 148 m/min –> v_c = 200 m/min dry	m = 1.56 wet
Source	Automotive supplier Germany	Automotive supplier France