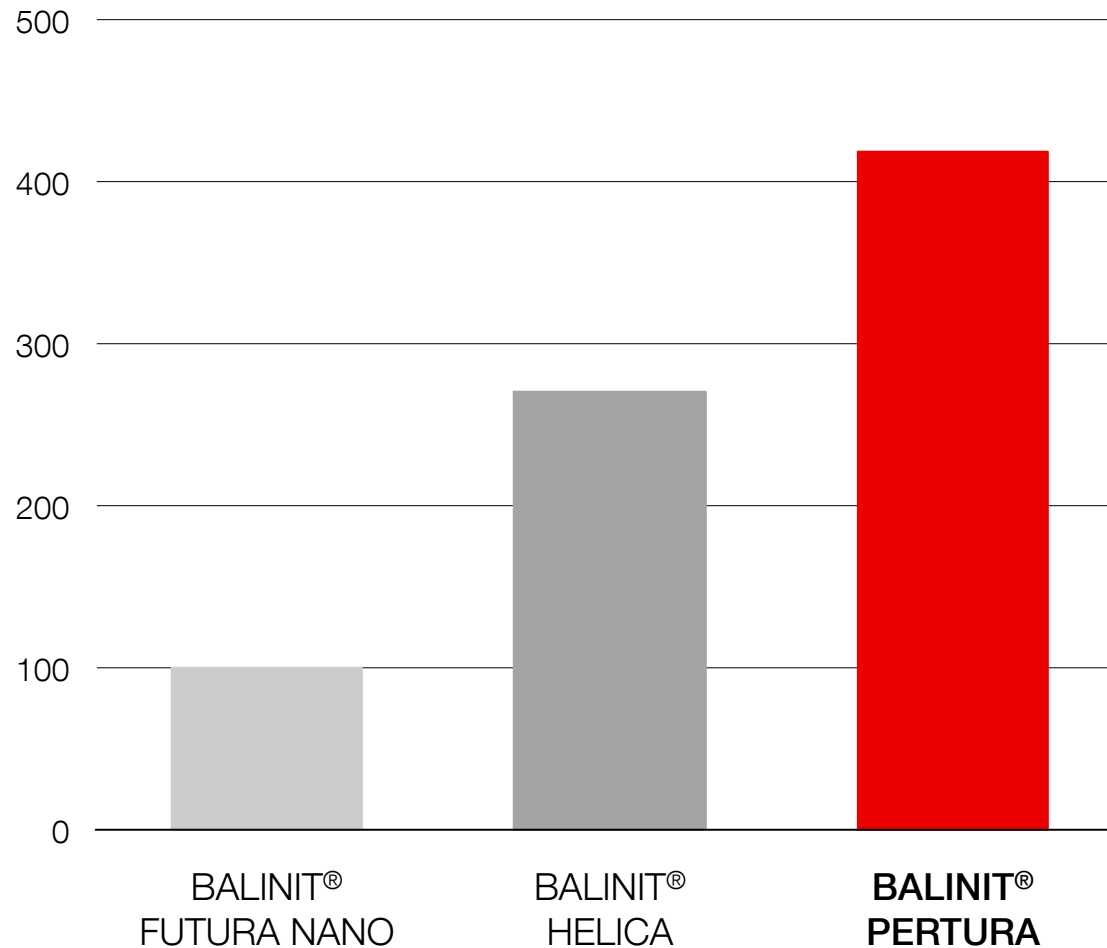


# Counterboring in steel at low cutting speed

Number of produced parts



## Tool

Solid carbide step drill  $\varnothing 12 \times 80$  mm

## Workpiece

Automotive component  
Steel 1.7220 (~AISI4135,  
~SCM435)

## Cutting Parameter

$v_c = 34$  m/min  
 $f = 0.10$  mm / rev  
 $a_p = 0.15$  mm  
Emulsion (internal cooling)

## Criteria for end of tool life

Quality of machined surface

## Source

Enduser Europa (Automotive industry)