

# freud

## Highlights 2019



# Your productive partner



## A wide range of top performing products

An extensive variety of precise and high-tech tools.

- Circular Saw Blades: the biggest manufacturer of high quality saw blades worldwide.
- Cutterheads and Brazed Cutters: freud sets the highest standard in the wood industry and window tooling.
- Knives, Spare parts and Accessories: in-house production of all Carbide inserts, unique in the world.
- Drilling, Routing & CNC Tools: a complete range for all applications.



A wide range of industrial cutting tools.

## High quality solutions for your applications

Engineering competence and manufacturing know-how.

- Customized-to-Order: products to match special production needs.
- Enhanced technologies: Silver I.C.E., Perma-SHIELD, EXrim, ISOprofil, High Speed ISOprofil and Split-Edge.

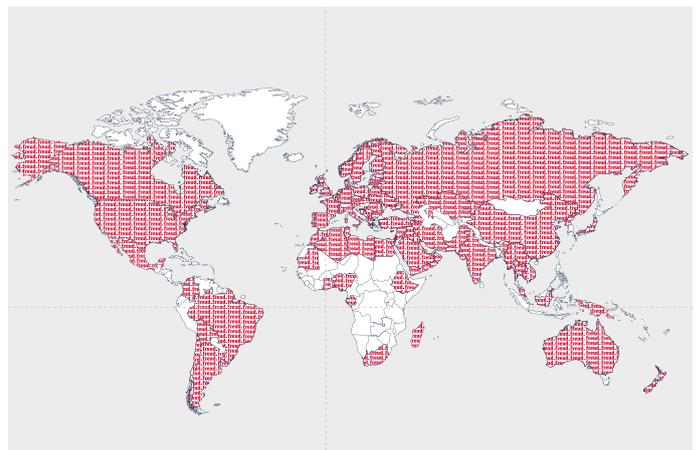


Advanced engineering and technology.

## Global services wherever you are

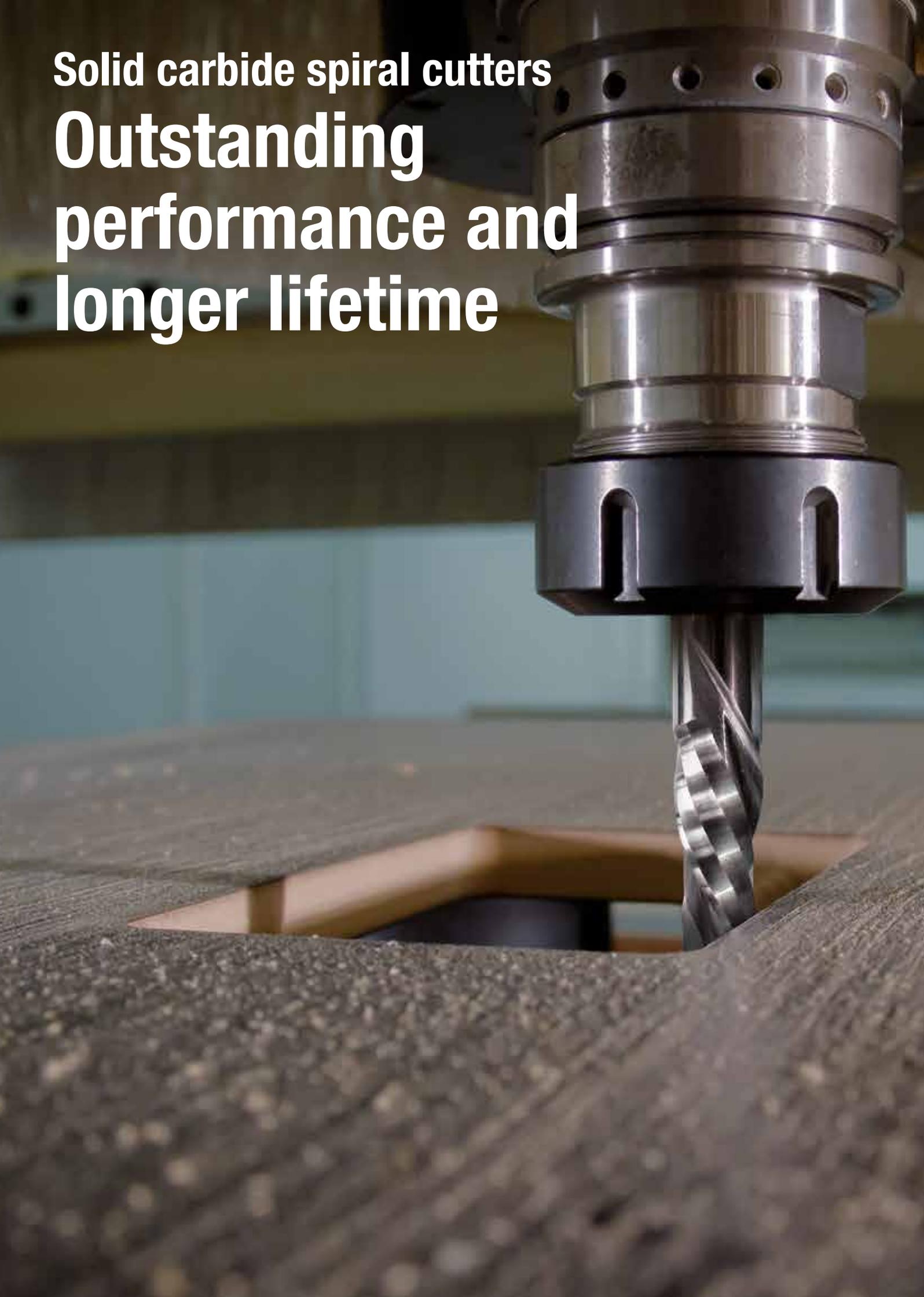
A belief in “think global and act local”.

- Our worldwide subsidiaries and partners in over 90 countries ensure an extensive service and distribution network.
- Since 2009 freud is part of Bosch group, leveraging the global network of the world leading technology supplier.



Worldwide presence.

**Solid carbide spiral cutters**  
**Outstanding**  
**performance and**  
**longer lifetime**



## Superior cutting performance

- Tight mechanical tolerances, special flute design and best-in-class manufacturing machines ensure the highest cutting performance, with reduced eccentricity and no vibrations.

## Flawless finishing in high demanding applications

- The range delivers a perfect finishing, as a result of the newly developed helix design and geometries.
- The exclusive relief angle of freud solid spiral cutters lowers the pressure on the cutting edge and reduces vibrations at high feed rate. The improved chip removal guarantees impeccable results.

## Up to 50% longer lifetime

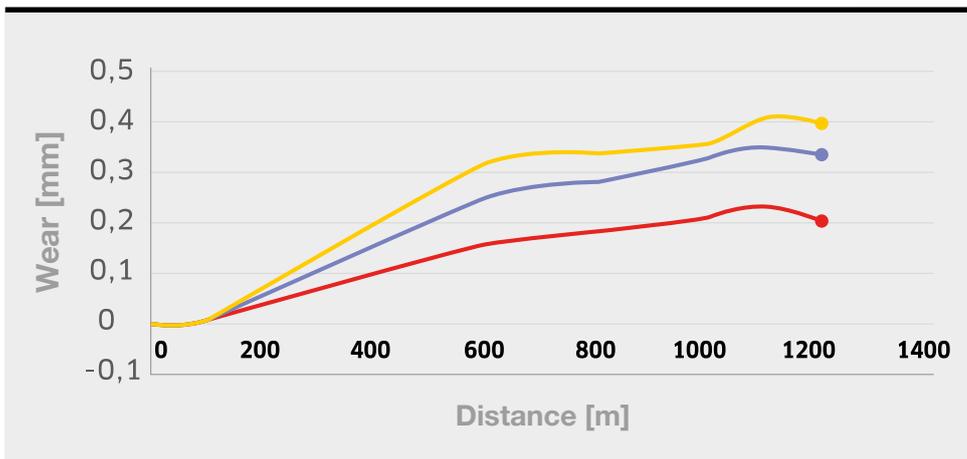
- The new micrograin carbide formula (H05MG), specifically engineered to achieve a high level of hardness and tenacity, guarantees the greatest resistance to wear and impact. Freud spiral cutters are, in fact, up to 2 times more resistant to heat and abrasion than competition.
- Freud manufactures a premium Titanium Cobalt Carbide – TiCo – for its unique resistance to resin and glue corrosion that extends the tool lifetime.



## Applications

To be used on all CNC routers for:

- Nesting
- Sizing
- Rabbeting
- Grooving
- Dividing cuts of raw material.



Wear test results : Freud SCH cutters deliver 50% longer lifetime than competitors.



- Freud SCH
- Competitor 1
- Competitor 2

Spoilboard surfacing cutters  
**Flawless finishing  
and extraordinary  
durability**



## Remarkable cutting performance

- Freud Spoilboard surfacing cutters NC12 provide the greatest cutting performance and vibration-free cuts, on accounts of tight body mechanical tolerances, tool dynamic balancing and extremely precise knives.

## Flawless finishing

- The new range of NC12 cutters delivers perfect results, thanks to the shear angle positioning of the knives.

## Exceptional durability

- A dedicated and premium Titanium Cobalt Carbide – TiCo – formula, in-house manufactured by Freud, offers 40% higher resistance to wear.



## Applications

Surfacing/skimming and rabbeting.

## Materials

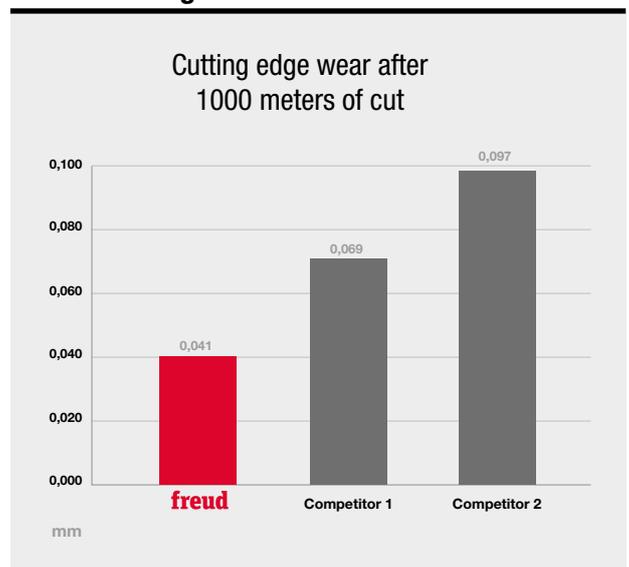
Wood and derivate panels.

### Knife wear



Wear has been measured as the distance between new and worn edge.

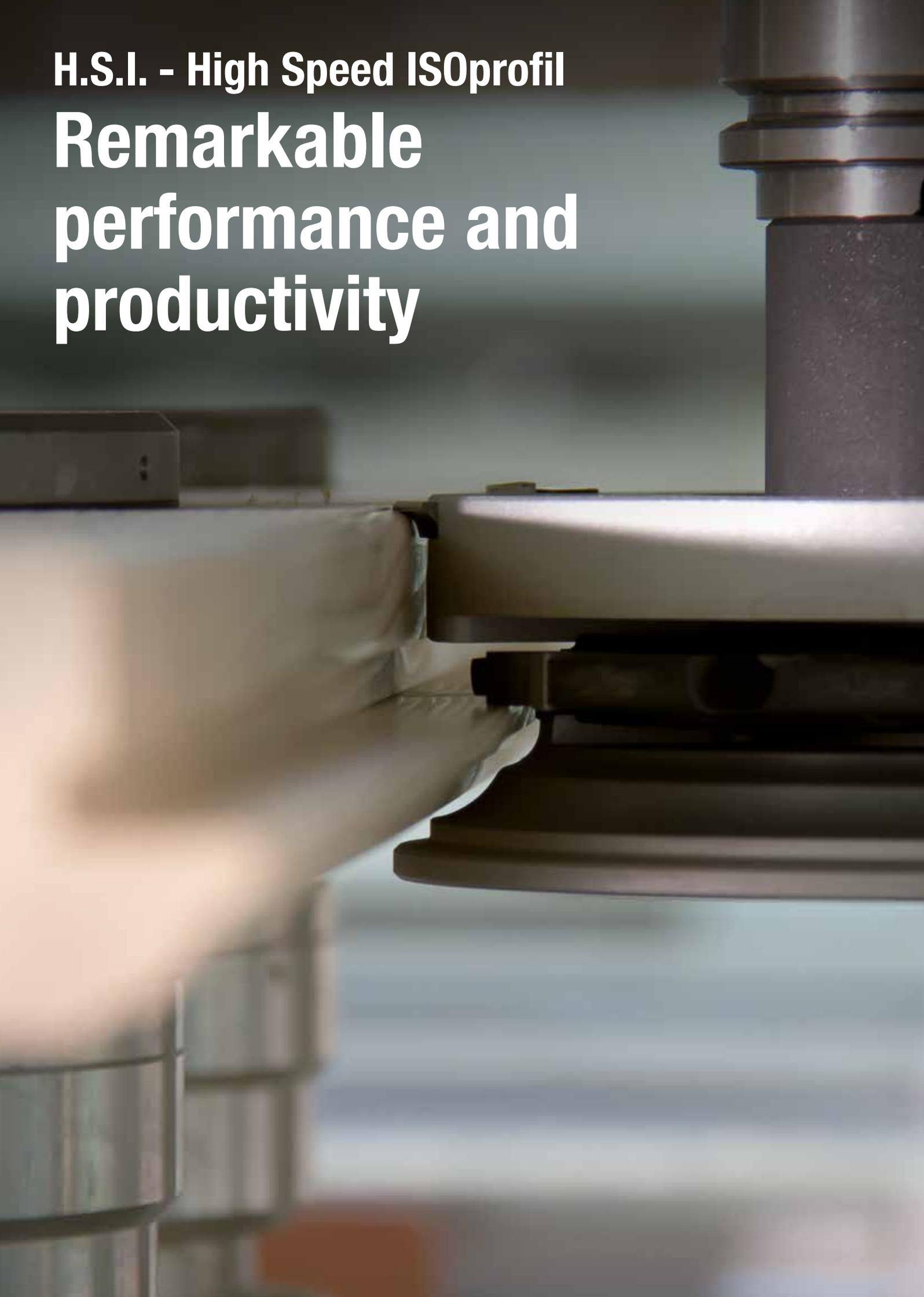
### Higher resistance to wear



Test results prove that freud NC12 deliver at least 40% higher resistance to wear.

**H.S.I. - High Speed ISOprofil**

**Remarkable  
performance and  
productivity**



## Supreme productivity

- Freud H.S.I. - High Speed ISOprofil, with an exclusive locking system, allows the use of ISOprofil re-sharpenable knives at high rotating speed (100m/s) and at extreme feed-rates.
- H.S.I. improves the machine performance, enabling a higher production in a reduced time. The ease of access to knives and their fast re-positioning reduce both the set-up and the maintenance time.

## Maximized efficiency

- Freud Split-Edge knives reduce the cutting pressure and prevent edge chip out.
- These knives, re-sharpenable up to 6 times, both enhance the productivity and increase profitability, always delivering a flawless profiling of door and window joints.

## Perfect surface cutting

- Freud leverages the Hybrid technology, a combination of existing Freud tested locking systems, which process in one step, the 2 step phases of pre-cutting and finishing. This results in an impeccable finishing and in an increased productivity.

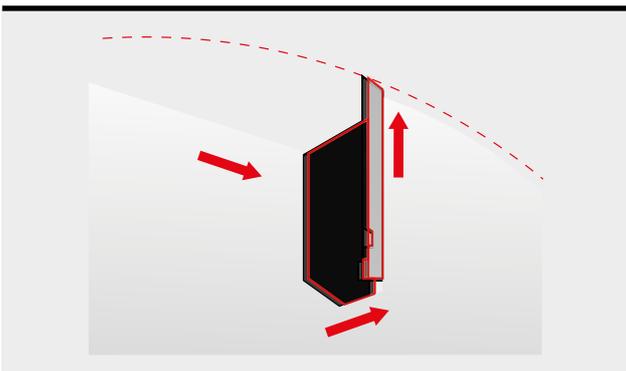


## Applications

Window tooling.

## Materials

Hard and soft wood.

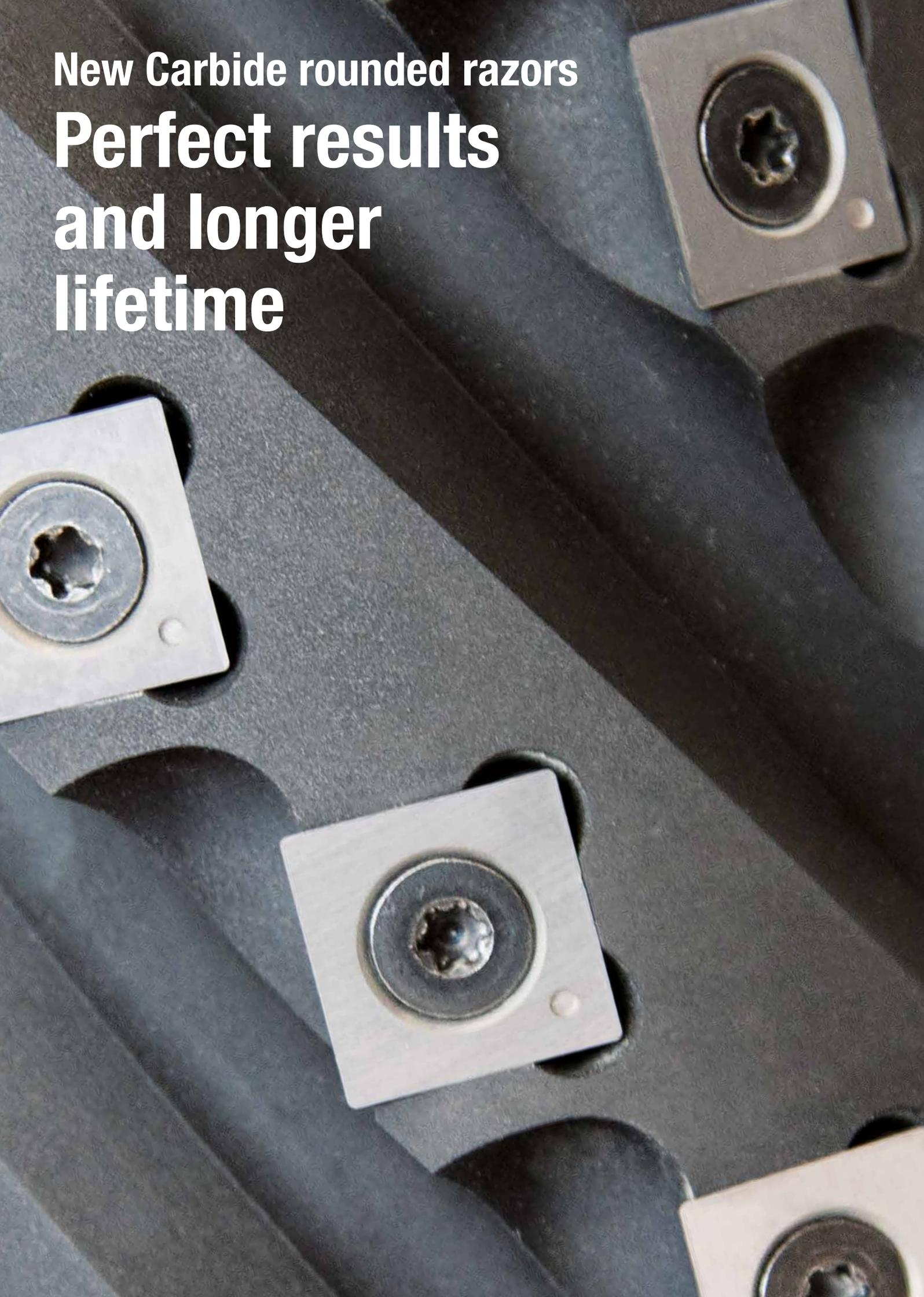


Automatic cutting diameter recovery system after re-sharpening.



**New Carbide rounded razors**

**Perfect results  
and longer  
lifetime**



## Flawless finishing in high demanding applications

- The range delivers a perfect finishing, as a result of tight tolerances, bore centering and thickness. Premium roughness is ensured by state-of-the-art grinding technology.

## Outstanding longer lifetime

- Fine-grain Carbide (K01S), specifically formulated to achieve a high level of hardness and tenacity. The formula guarantees the greatest resistance to wear and impact.



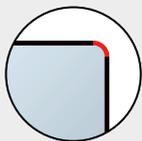
## Applications

Spiral or helical planer heads.

## Materials

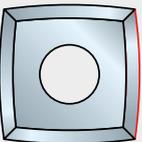
Wood and derivatives.

### How to read codes



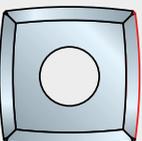
#### RR01

Razor with rounded corners



#### RR10

Razor with rounded edges



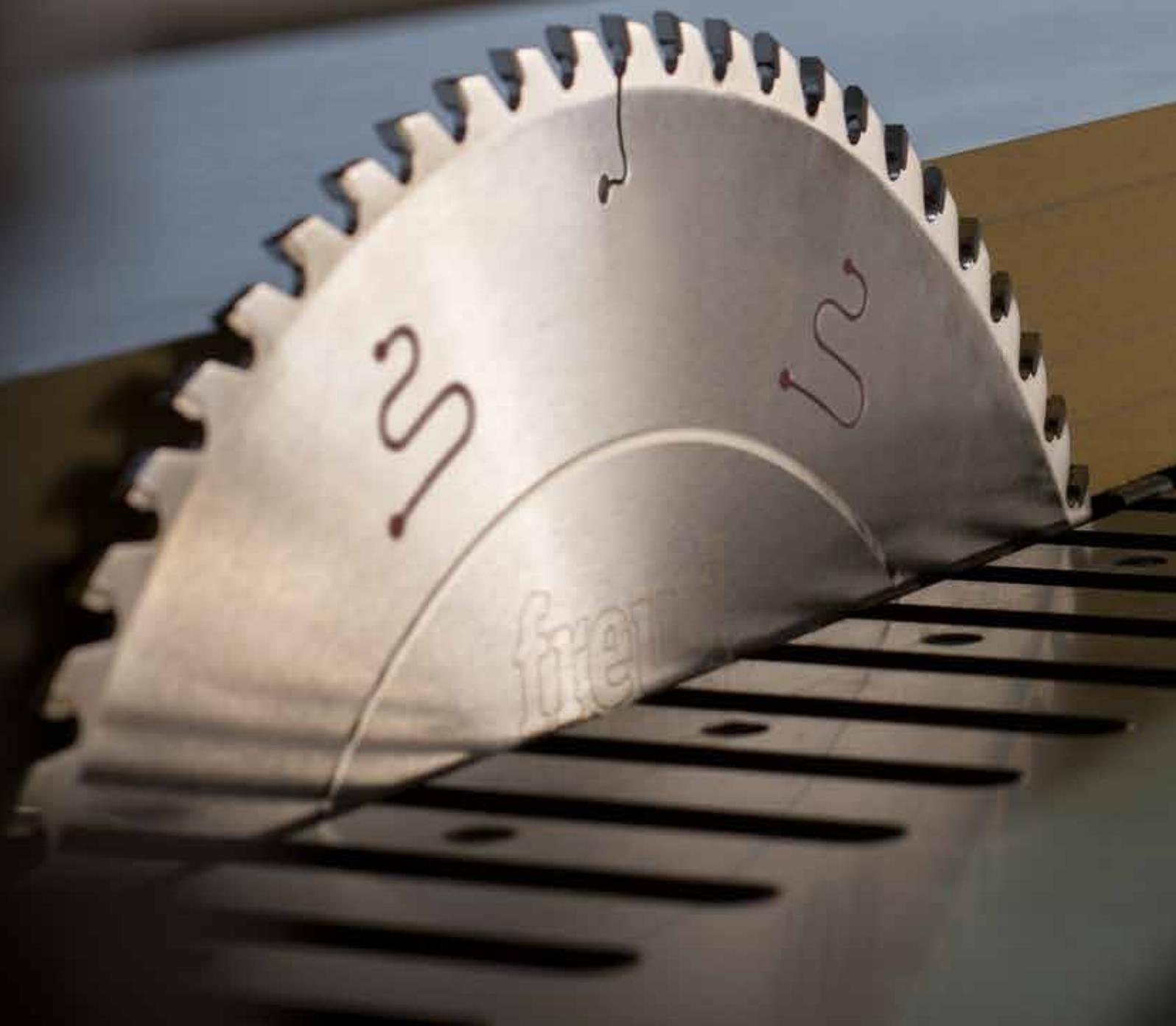
#### RR11

Razor with both rounded corners and edges



**LSB X - Saw blades for  
panel sizing**

**30% longer  
lifetime**



## Long lasting results

- Increased durability per sharpening cycle, due to the latest improvements in the production process.
- Advanced technology implementation to deliver a superior performance in the panel sizing applications.

## Multiple sharpenings

- Tip thickness 30% greater than standard tips - super square tooth design.
- Up to 30 sharpenings to extend the product lifetime.

## Wider range - a solution for every need

- A larger variety of blade dimensions fulfills the requirements of the most popular panel sizing machines.
- The range includes diameters from 300 mm to 720 mm.



## Applications

Panel sizing.

## Materials

Chipboard or MDF laminated with melamine or plastic materials.

Diameter from 300 mm to 720 mm.

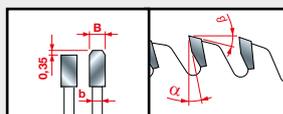
$D \leq 600 \text{ mm } \alpha 15^\circ \beta 15^\circ$

$D > 600 \text{ mm } \alpha 18^\circ \beta 13^\circ$

### HW H00XA



Material



Tooth features

DP scorers

# Polycrystalline diamond for supreme lifetime



## Exceptional longer lifetime

- Freud scorer tips combine the hardness of the Polycrystalline Diamond with the extreme wear resistance of the in-house manufactured Carbide, to achieve extended lifetime as well as unparalleled finishing results.
- The tips help to reduce the machine downtime and improve the machine productivity, especially in the industrial panel sizing application.

## Reduced friction

- Freud Silver I.C.E. Coating, a high performing and anticorrosive coating, laid over the entire body, minimizes friction, ensures lower operating temperature and delivers cut precision.
- The non-stick feature improves chip ejection and notably reduces resin build up, extending the blade lifetime.

## Improving machining performance

- DP conical and adjustable scorers are suitable for manual and automatic feed, achieving the greatest results when cutting bilaminated chipboard or MDF.
- With a continuous commitment in new materials and their properties, Freud engineers design and develop innovative solutions that deliver a distinctive advantage to players in the furniture and construction industry.



Polycrystalline  
Diamond



Silver I.C.E.  
Coating

## Applications

Panel sizing.

## Materials

Chipboard or MDF laminated with melamine or plastic materials.

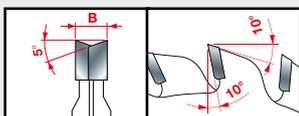


### Adjustable scorer

Diameters: 100 - 120 mm  
Number of teeth: Z=12 + 12  
DP height: H6 mm



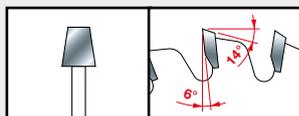
Material



Tooth features

### Conical scorer

Diameters: 120 – 215 mm  
Number of teeth: Z=24 – Z=36  
DP height: H4 mm and H6 mm



Tooth features

# freud

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**freud S.p.A.**  
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