

# Innovation highlights

## Wood and metal working

CERATIZIT is a high-tech engineering group specialised in tooling and hard material technologies.

**Tooling the Future**

[www.ceratizit.com](http://www.ceratizit.com)

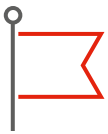
# CERATIZIT Group

For over **95 years**, CERATIZIT has been a **pioneer** developing exceptional hard material products for cutting tools and wear protection.

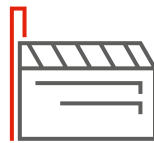
The privately owned company, based in Mamer, Luxembourg, develops and manufactures highly specialised carbide cutting tools, inserts and rods made of hard materials as well as wear parts.

The CERATIZIT Group is the **market leader** in several wear part application areas, and successfully develops new types of cemented carbide, cermet and ceramic grades which are used for instance in the wood, metal and stone working industry.

## Facts and figures



**1 headquarters**  
Mamer (Luxembourg)



**27**  
production sites



**> 60**  
sales subsidiaries



**> 6,000**  
employees



**> 100,000**  
different products



**> 600**  
patents and  
utility models



**> 100**  
employees in R&D



**> 10**  
innovation awards



**30%**  
of products developed  
in the last 5 years

# Always

## one step ahead

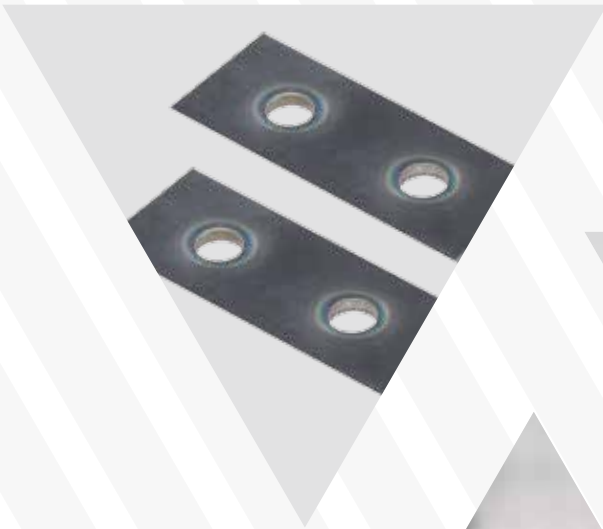
Woodworking innovations  
start now

# 2017

You can expect progress that keeps bringing  
your production one step ahead.

Stay tuned for the next exciting innovation  
highlights from your technology leader  
Toolmaker Solutions by CERATIZIT!

# KCR18+ for saw tips, knives and rectangular strips



# Go chrome with KCR18+

Make use of the advantages of our Cr-Ni binder based KCR grades:

- ▲ Higher process reliability thanks to corrosion and oxidation resistance during cutting.

- ▲ Higher performance potential thanks to the improved ratio of hardness to fracture toughness.

## Technical specifications:

Grade	Binder	Grain size	Hardness		Fracture toughness (SEVNB) [MPa* m <sup>1/2</sup> ]	Transverse rupture strength [MPa]
			(HV10)	(HRA)		
KCR18+	9.5 %	submicron	1,590	91.7	10.8	3,750

### Saw tips

In particular during the summer months KCR18+ offers you excellent sawing results with primary summer wood. Most of our saw tip variants are available upon request.

### Indexable knives

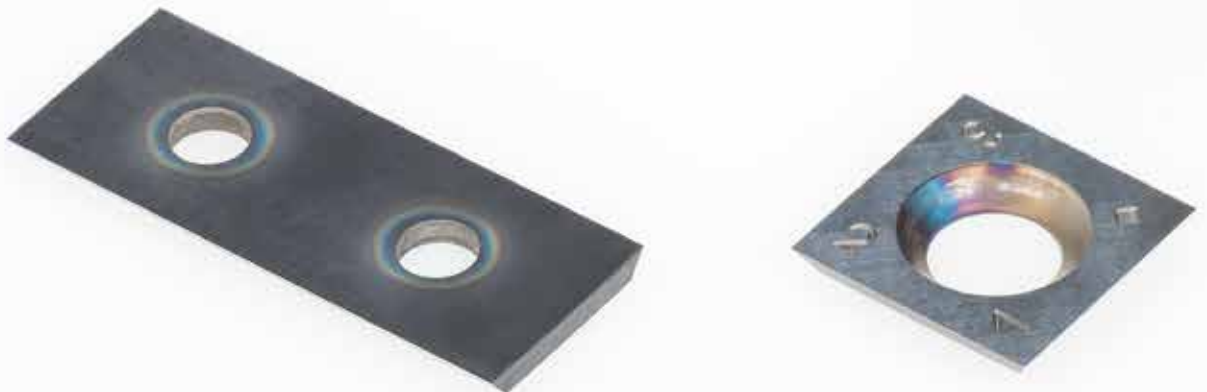
Our range of indexable knives has been specially developed for the production of window tools. Thanks to their excellent grinding quality our knives achieve both longer service life and an improved surface quality.

### Rectangular strips

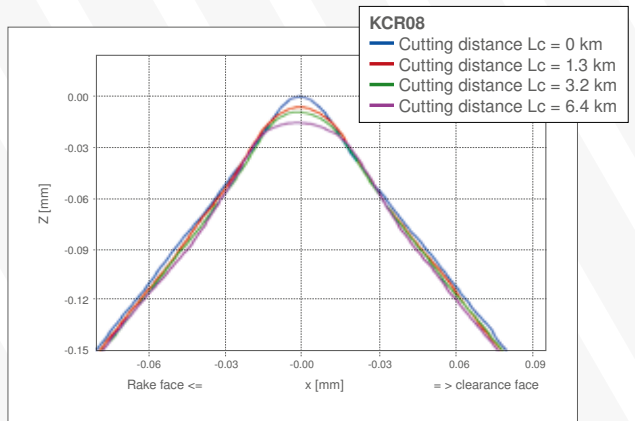
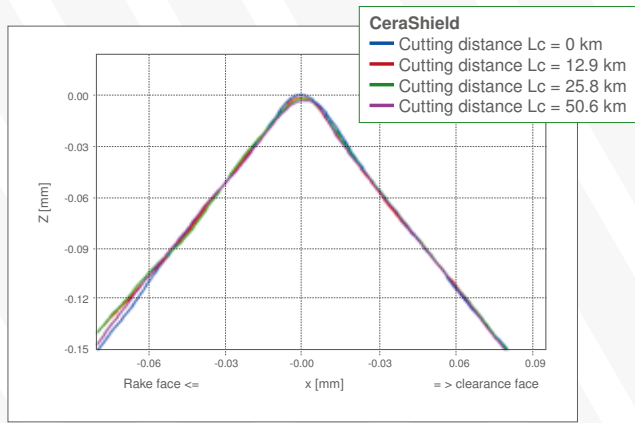
The new KCR18+ grade stands for performance and longer product life, and thus also for improved reliability in practice. Our KCR18+ range includes rectangular strips with brazing grooves in various dimensions. Combining KCR18+ with brazing grooves, brazing becomes an easy process. KCR18+ is the ideal replacement for MG18. Whether profiling or planing, our new grade range always offers a solution for all your applications.

# Go ahead with **CeraShield.**

**10 x better**



# CeraShield – more performance for softwood



## See for yourself

With CeraShield you can look forward to a clear increase in productivity in direct comparison with uncoated knives of grade KCR08.

Thanks to a special coating and grinding process you can benefit from a long-lasting cutting edge, which not only makes the machining of softwood easier but also offers a better cost-benefit ratio.

You can count on the technology leader for wood machining.

# Be a step ahead of your competitors

CeraShield is the latest innovation in the field of cutting technology from Toolmaker Solutions by **CERATIZIT** providing **best performance in both hardwood and softwood machining**.

The unique grinding and coating process allows us to create a long-lasting cutting edge which practically rules out wear on the rake face.

With this application improvement in the production process, CeraShield supports **increased cost efficiency** and **hence improved competitiveness**.

The longer tool life of CeraShield **reduces the costs** of your stock turnover as you can generate more profit while selling fewer goods.

In addition, you can order our latest technology from stock, allowing quicker access and reduced stock costs – innovation just in time!

## Let us convince your customers



### Advantages

Fewer changes necessary due to tool wear



Consistent cutting quality



Improved surface quality



Less wear



Compatible with existing tooling systems



### Benefits

Minimised downtime increases productivity

Little or no further processing needed

Cost savings

Better life cycle assessment within production and reduced waste disposal costs

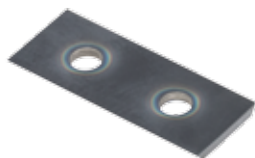
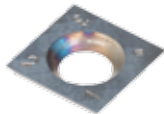
No acquisition costs



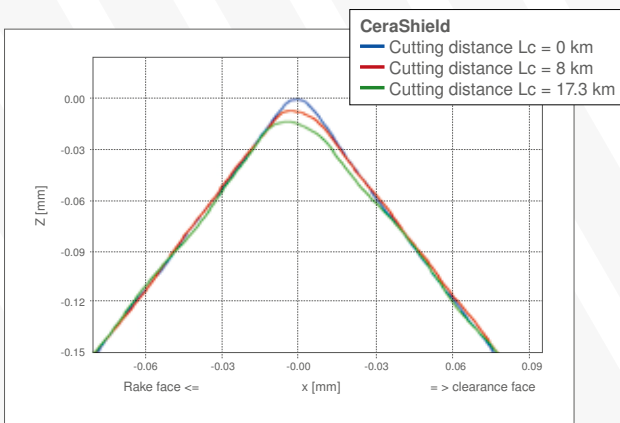
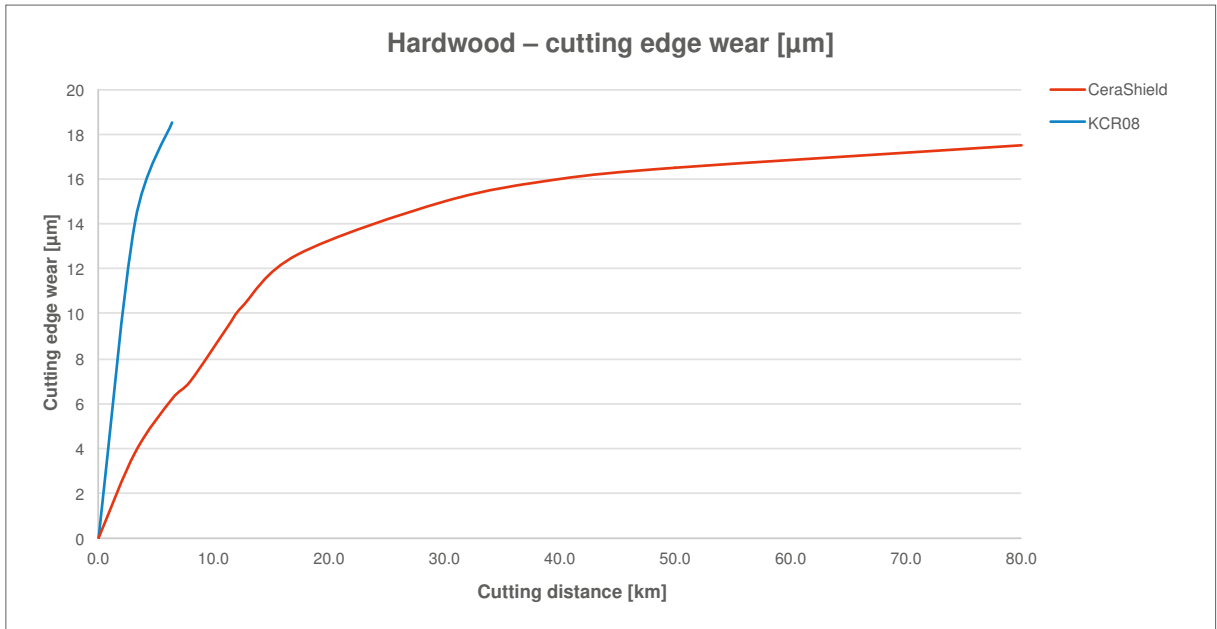
# The following types of CeraShield are available:

- ▲ Scorers in various dimensions (12x12, 14x14, 15x15)
- ▲ Long knives of different lengths with 1 or 2 holes
- ▲ Long knives of different lengths with 4 cutting edges and 2 holes



Product overview		Material number
	Indexable knives with 2 cutting edges	CTK ST 15.0x12.0x1.5 <b>CS1</b> 12006172
		CTK ST 20.0x12.0x1.5 <b>CS1</b> 12006173
		CTK ST 30.0x12.0x1.5 <b>CS1</b> 12006175
		CTK ST 40.0x12.0x1.5 <b>CS1</b> 12006177
		CTK ST 50.0x12.0x1.5 <b>CS1</b> 12006178
	Indexable knives with 4 cutting edges	CTK FC 19.5x12.0x1.5 <b>CS1</b> 12006174
		CTK FC 29.5x12.0x1.5 <b>CS1</b> 12006176
		CTK FC 49.2x12.0x1.5 <b>CS1</b> 12006179
	Scorers with 4 cutting edges	CTK FC 12.0x12.0x1.5 <b>CS1</b> 12005682
		CTK SC 14.0x14.0x2.0 <b>CS1</b> 12146584
		CTK SC 15.0x15.0x2.5 R0.5 <b>CS1</b> 12146582

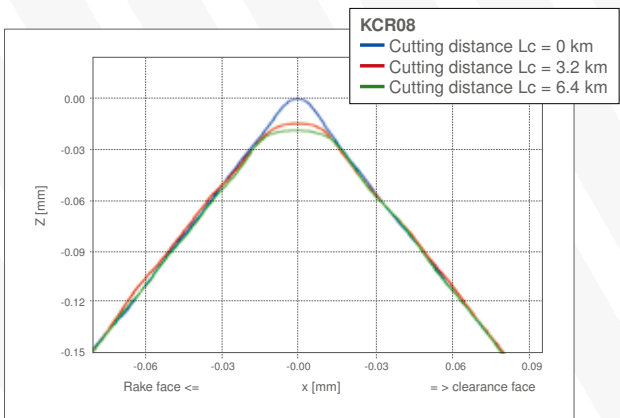
# CeraShield – more performance for hardwood



## Coating makes the difference

CeraShield not only reduces cutting edge wear, in the long run it also allows you to achieve a better quality of cut when machining hardwood.

Thanks to our recently developed coating process, you can look forward to a clear increase in productivity compared to uncoated knives in grade KCR08.



You can count on the innovation generator of the sector - Toolmaker Solutions by CERATIZIT.



# Cermet grade CTF34T for metal saw tips

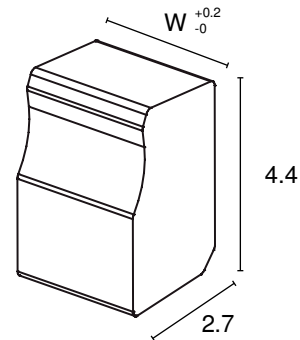


# Long service life and easy handling

Take advantage now of our new cermet grade CTF34T for metal sawing. Your benefits: **10% longer life time** compared with common grades available on the market. **Save time and costs**, as CTF34T saw tips can now be **ground and brazed even more easily than before**.

### Available geometries

Saw tips in the new cermet grade are available with the geometry 50661 (see drawing), more designs on request.



### Made to measure for your application

With the new cermet grade CTF34T you can saw a wide variety of **steel alloys** precisely and reliably, e.g.:

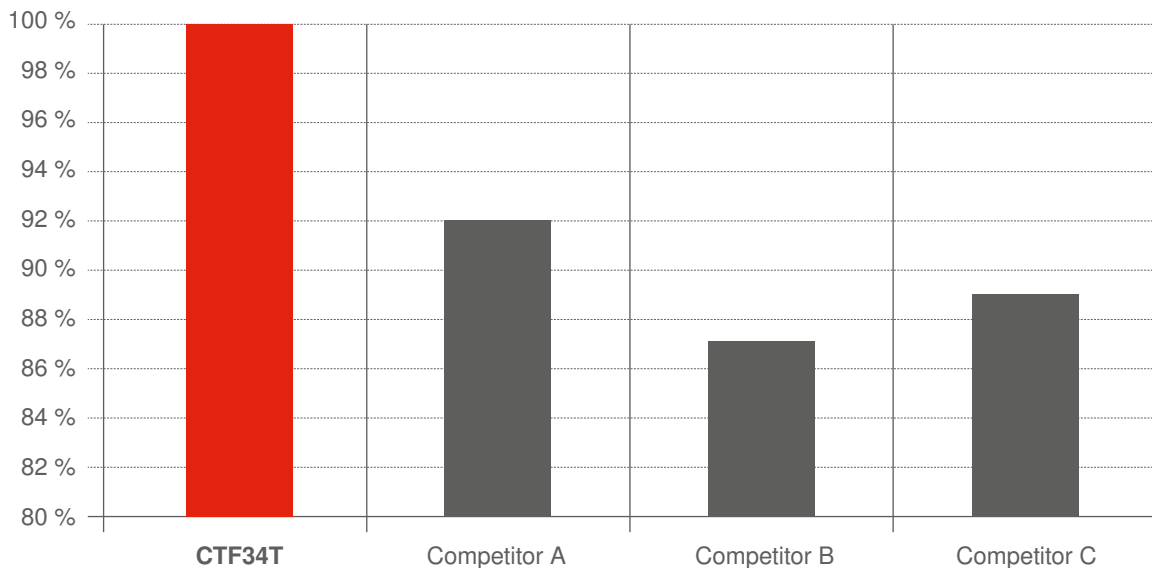
- ▲ Constructional steel (GCr15, SUJ2, SCr420)
- ▲ Carbon steel (100CrMnSi6, 20Cr, 1055, SUJ2, 4320H, SCM420)
- ▲ Tool steel (100Cr6)
- ▲ Mould steel (S2Si)

### Technical specifications:

Main material	Binder	Grain size	Hardness		Fracture toughness (SEVNB) [MPa*m <sup>1/2</sup> ]	Transverse rupture strength [MPa]
			(HV10)	(HRA)		
Cermet	17 % Co + Ni	medium	1,490	91.0	10.0	1,960

### Competitor comparison

Compared to the competition, the new CTF34T cermet grade pulls ahead with an increased service life.



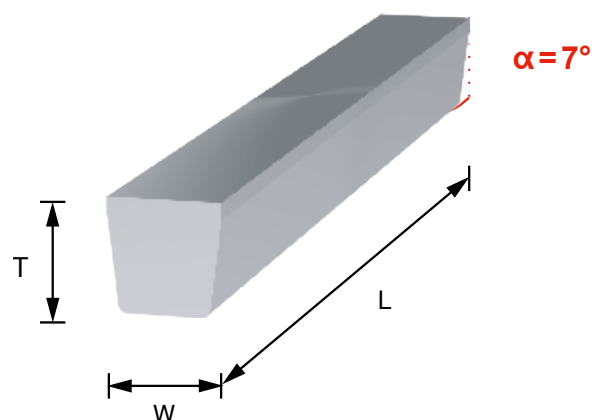
# Strobe blanks with $7^\circ$ point angle



# Optimised product geometry for more economic efficiency

Thanks to the new geometry with a 7° angle on both sides, you will save material costs and grinding time, thus optimising your internal processes. Our standard range can be found in the wood sawing catalogue, other dimensions are available upon request. Our customer service will be happy to assist you at any time.

Both the new and existing geometry are available in the universal grade CTOPP10:



Type, description	T [mm]	W [mm]	L [mm]	$\alpha$ [°]	CTOPP10
SB02	2.00	2.00	310.00	7	12121642
SB02	2.00	2.20	310.00	7	12121644
SB02	2.00	2.40	310.00	7	12121645
SB02	2.00	2.60	310.00	7	12121647
SB02	2.00	2.80	310.00	7	12121649
SB02	2.00	3.00	310.00	7	12121650
SB02	2.00	3.20	310.00	7	12121651
SB02	2.00	3.40	310.00	7	12121652
SB02	2.00	3.60	310.00	7	12121653
SB02	2.00	3.80	310.00	7	12121654
SB02	2.00	4.00	310.00	7	12121656
SB02	2.00	5.00	310.00	7	12121657

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