



Your **skills**, your **art**.
With cutters made by Komet.







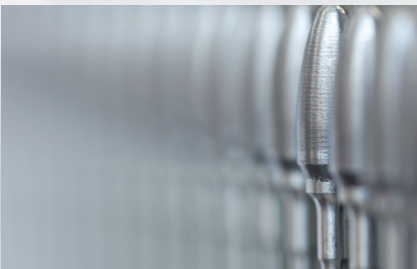
At the end of the day, it's the result that counts.



Anticipating new trends has a long tradition at Komet. Otherwise, we would not be what we are today: one of the most successful brands in the dental office and laboratory. We partly owe our success to our ability to create innovative new products all the time. The innovations made by Komet have been setting standards on the dental market since the foundation of the com-

pany in 1923. At the end of the day, we want our quality products to improve the outcome of your everyday work. Our commitment is to offer efficient and durable instruments with the highest level of precision and safety.

Each Komet instrument is designed to bring your artistic skills to perfection. This is our art.





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Content

6 7	Plaster	
8 13	Acrylics Acrylic veneering materials	
14 17	Precious metals (EM) Non-precious metals (NEM)	
18 21	Model cast Titanium	
22 23	Instruments for left-handed operators	
24 26	Information/Notes	

Work on plaster models. Wet and dry plaster.



Increased safety. Increased material reduction. No clogging.

Dental laboratories place high demands on cutting tools used for work on plaster.

These tools are expected to remove large amounts of material without clogging up.

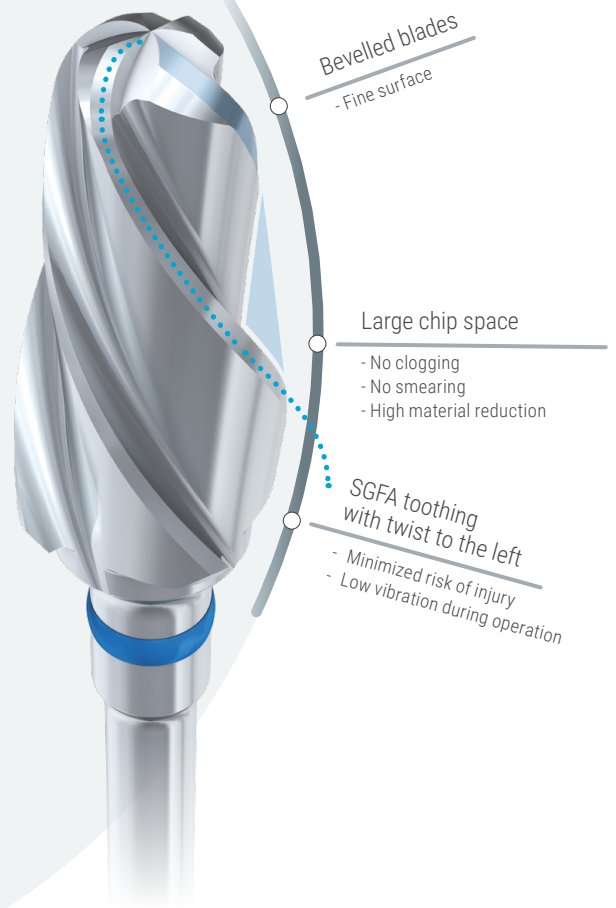
This is especially true when working on plaster that is still slightly wet. Modern power systems with powerful motors require a high standard of work safety, as the cutter might detach itself from the chuck if this is worn or clogged, especially when working at high speed and contact pressure.

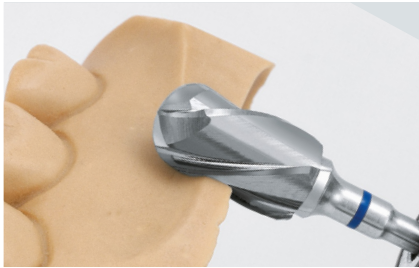


The SGFA cutters, a further improved version of the tried and tested super coarse SGEA tothing, guarantee efficient and safe work on all types of dental plaster.

The reduced number of blades allows significant uninterrupted plaster removal during the cutting process. The extra large chip spaces prevent the cutters from clogging up with wet plaster.

What's more, thanks to the combination of the safety tothing and the bevelled blades, these cutters are capable of removing large amounts of material while achieving an excellent surface quality.





Wet plaster:



Dry plaster:



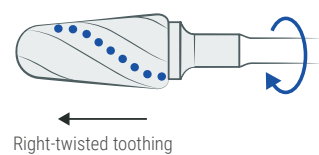
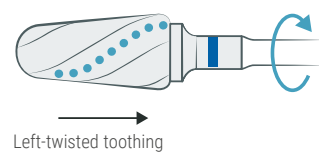
Recommendations for use:

- Intended for use in a power system for the dental laboratory. Work with low contact pressure.
- Optimum speed:
 15,000 rpm



What does safety tooling mean?

During rotation, cutters with left-twisted tooling are securely held in place in the chuck. Cutters with right-twisted tooling tend to detach themselves from the chuck.





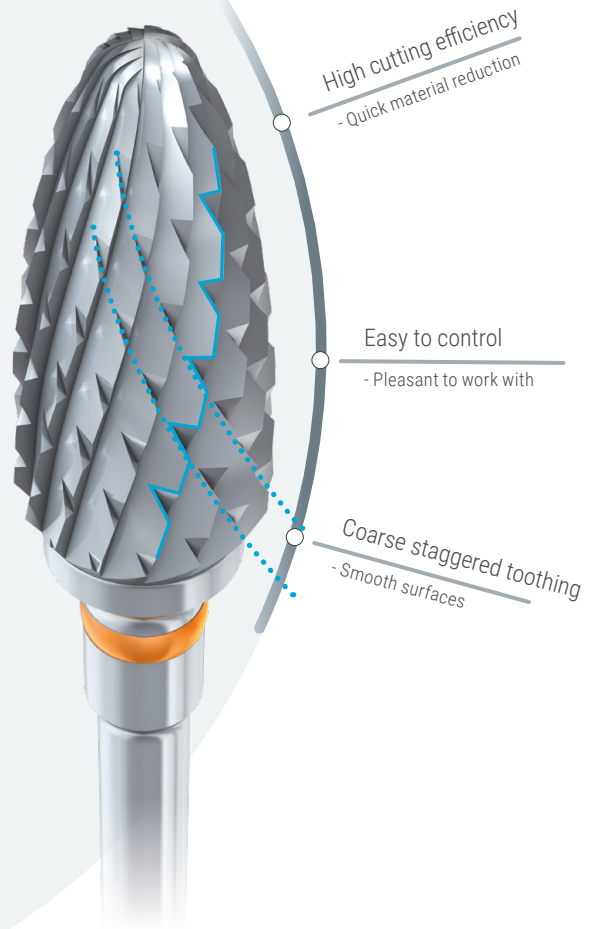
Work on acrylics. Hard denture acrylics.

Time is money. Especially when it comes to processing dental acrylics.



ACR cutters have proven to be ideally suitable for fast and effective shaping of denture acrylics. The special intermediate tothing of these cutters is right between the coarse and medium staggered tothing. This tothing makes the cutters particularly pleasant to work with, even during rough work on denture acrylics.

These cutters are very efficient and economic in use, which makes them almost indispensable for processing dental acrylics.




High cutting efficiency
- Quick material reduction

Easy to control
- Pleasant to work with

Coarse staggered tothing
- Smooth surfaces



Recommendations for use:

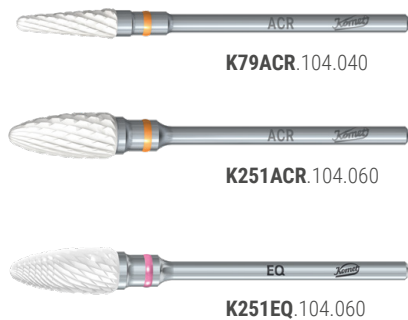
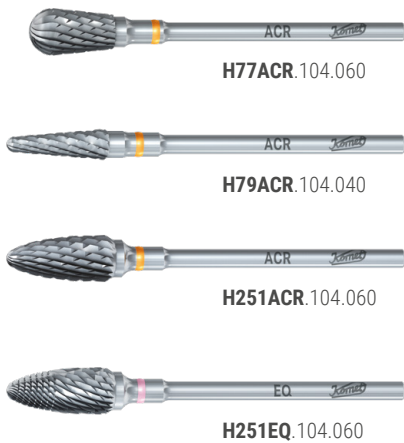
- Apply low contact pressure only and work towards the body.
- Optimum speed:
 _{opt.} 15,000 rpm



Work without need to change tools:

Our dual EQ cutter is provided with two types of tothing. The very fine tothing at the instrument's tip is ideal for trimming and smoothing in the interdental region, whereas the coarse staggered tothing on the lower end of the working part is perfectly suited for thinning out the margins of the denture.

ACR and EQ cutters are also available as ceramic versions:



Work on acrylics. Soft acrylics.



Does work on soft acrylics cause you problems?

Here is the solution: The tungsten carbide cutter with GSQ toothing - especially developed for work on soft materials, for example soft acrylics and silicone.



Thanks to its large chip spaces and the reduced number of blades, the highly efficient GSQ toothing with deep cross cut is ideal for this type of work.



Handy hint:

GSQ cutters are also available as ceramic version.

Recommendations for use:

- Optimum speed:
⌚_{opt.} 15,000 rpm



H79 GSQ.104.040



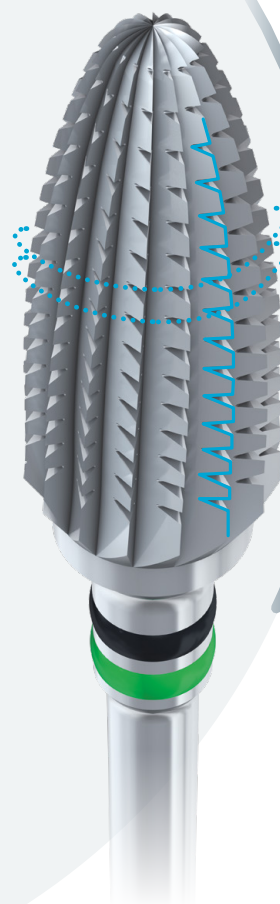
H79 GSQ.104.070



H251 GSQ.104.060



H261 GSQ.104.023

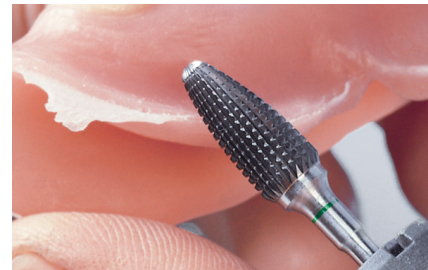


Effective cutting
- Of soft acrylic materials

Deep chip spaces

- No clogging

High cutting efficiency
- Pleasant to work with



FSQ cutters ideally complement the range of GSQ cutters. Both types of cutters are provided with a cross-cut toothing, which makes them particularly suitable for trimming denture acrylics and the transition between hard and soft acrylics, for example in case of soft relines.

Caution! For work on soft acrylic materials, a higher initial contact pressure is required to overcome the penetration resistance of the blades when making contact with the workpiece. The working part will get hot during use. The generation of heat is intentional as this will improve the cutting efficiency of the instrument.

Recommendations for use:

- Optimum speed for acrylics:
⌚ _{opt.} 15,000 rpm



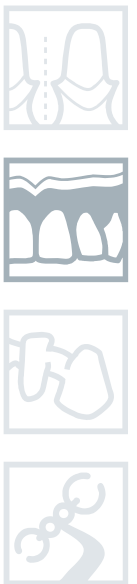
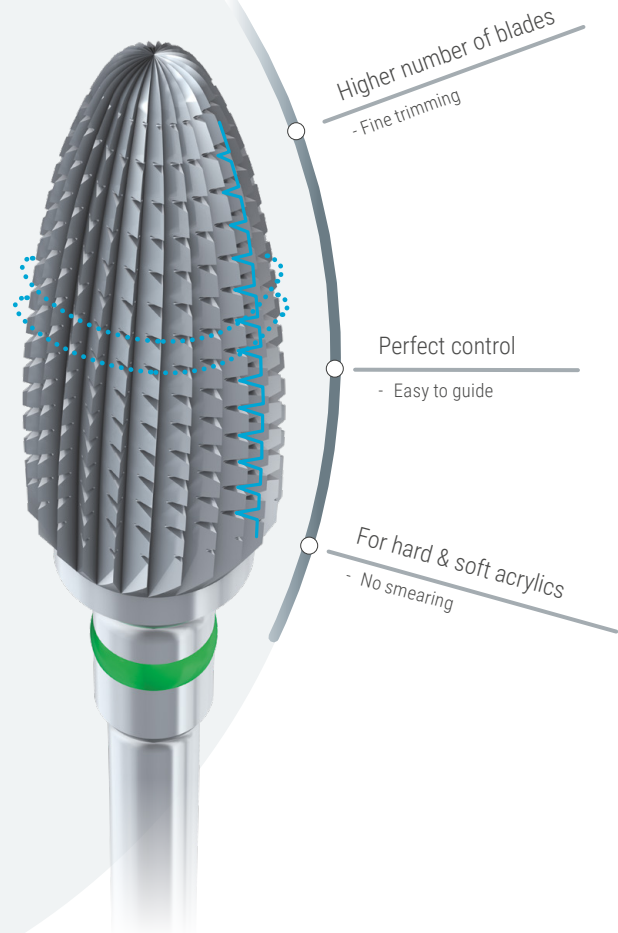
H 79 FSQ.104.040



H 251 FSQ.104.060



H 261 FSQ.104.023





Work on acrylics. Acrylic veneering materials and more.



The all-rounder when it comes to veneering materials.



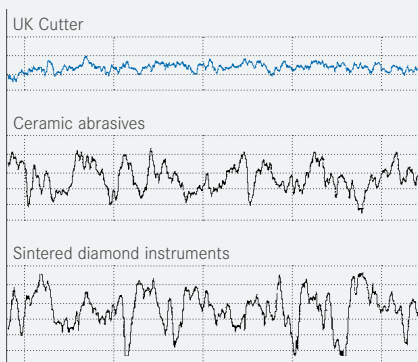
Up to now, the inadvertent creation of scratched and rough surfaces on tooth-colored veneering acrylics caused by the rough surface structure of the instruments used was a common problem. With the introduction of the UK tootinging this is now a thing of the past. The UK tootinging is particularly suitable for working on all types of ceramic veneering materials (before glaze firing) and acrylic veneering materials.



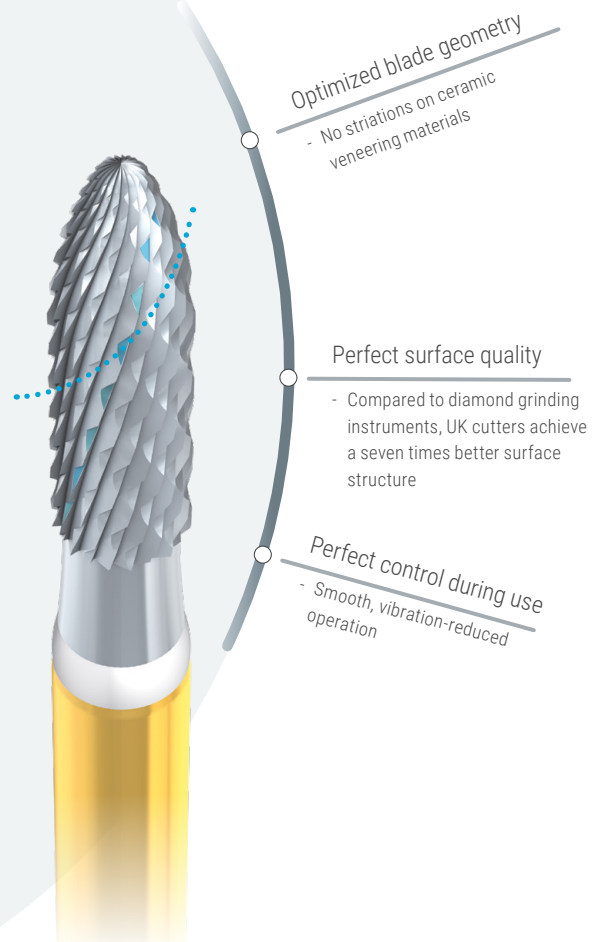
UK cutters are equally suitable for trimming the transition between metal frame and veneering material.

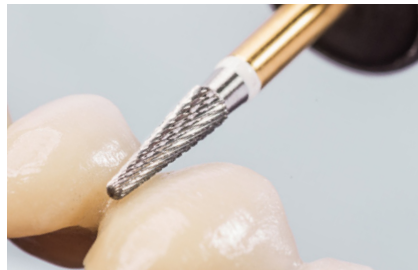


Thanks to their double tootinging, the UK cutters create surfaces that meet even the highest demands.



Comparison diagram of surface qualities (roughness μm)





H73 UK.104.014



H79 UK.104.040



H139 UK.104.023

Recommendations for use:

To be used in a power system for the dental laboratory.

- Optimum speed for acrylic veneering materials:
 $\varnothing_{opt.}$ 15,000 – 20,000 rpm
- Optimum speed for ceramic veneering materials:
 $\varnothing_{opt.}$ 20,000 – 25,000 rpm



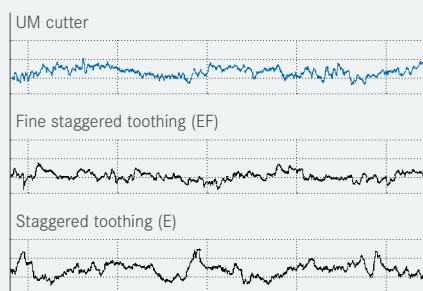
Work on metal. Precious metals.

Effective substance removal and smooth surfaces with only one cutter.



The special Komet UM tooling unites three different types of tooling on just one instrument and therefore meets requirements which up to now appeared to be contradictory. The UM cutters offer a range of advantages over tungsten carbide instruments with conventional tooling.

Provided with brand new blade configuration, the instrument runs smoothly and without putting strain on the operator's wrist. The use of particularly fine, hot-isostatically pressed tungsten carbide guarantees sharp, unmarred blades and a long service life.



Comparative diagram of the surface quality (Roughness μm)



Special tooling

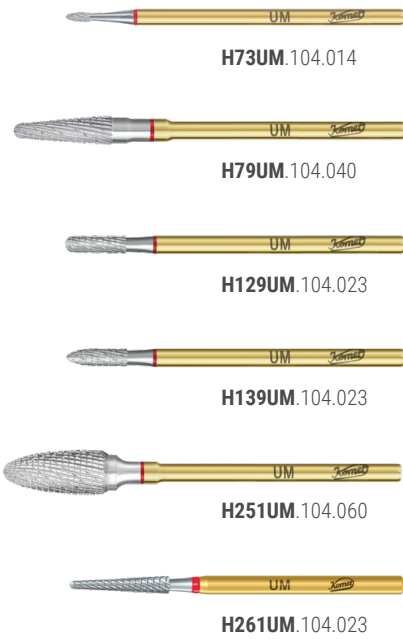
- Maximum substance removal on non-precious metals

Smooth surfaces

- Small chips
- Efficient

Perfect control during use

- Almost vibration-free, smooth run



Recommendations for use:

- Optimum speed for precious metals:
opt. 25,000 rpm
- Optimum speed for non-precious metals:
opt. 15,000 rpm



Handy hint:

More contact pressure = greater substance removal
 Less contact pressure = smooth surfaces

Laboratory tests confirm: :

UM cutters produce a better surface than cutters with conventional staggered tooth- ing (E-tooth- ing) and the surface quality achieved is equal to that produced with fine (EF) tooth- ing.

Work on metal. Non-precious metals.



The next generation – brought to perfection.

We strive to further improve what is already excellent – to the benefit of our customers. A typical example for this are the new NEX cutters: These extremely effective tungsten carbide instruments are an enhanced version of our NE cutters. The new toothing is ideal for work on non-precious metals and model cast alloys. NEX cutters are

extremely powerful. They combine maximum substance removal and a long service life, which makes them an efficient tool for hard-to-cut alloys. Additional advantage: The surfaces created are smooth and easy to polish.



Special toothing

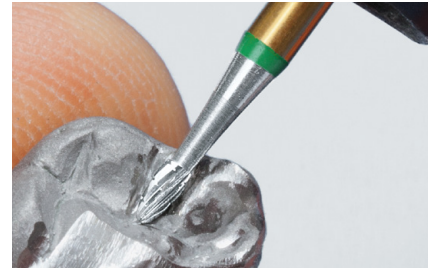
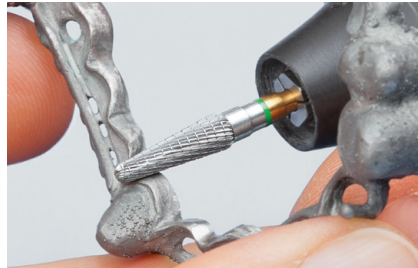
- Maximum substance removal on non-precious metals

Smooth surfaces

- Small chips
- Efficient

Perfect control during use

- Almost vibration-free, smooth run



H73NEX.104.014



H77NEX.104.023



H79NEX.104.040



H139NEX.104.023



H251NEX.104.060

Recommendations for use:

- Optimum speed for non-precious metals: $\odot_{opt.}$ 20,000 rpm



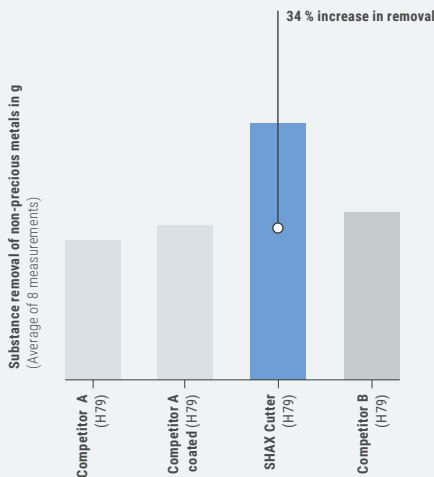
Work on metal. Model cast.



SHAX and NEF. The ideal solution for hard-to-cut alloys.

For technical reasons, a lot more cast material has to be removed when retouching objects made of non-precious metals and alloys completely free of precious metal than during the rework of precious metal alloys. Consequently, the tools used have to work a lot harder and are more prone to premature wear. In order to keep extra retouching within limits, it is necessary to use reliable cutters with a long service life that combine minimum wear and maximum substance removal.

Komet has come up with a solution: its sharp SHAX tothing for excellent substance removal and NEF tothing for smooth, easy to polish surfaces.



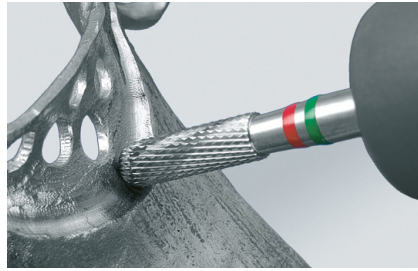
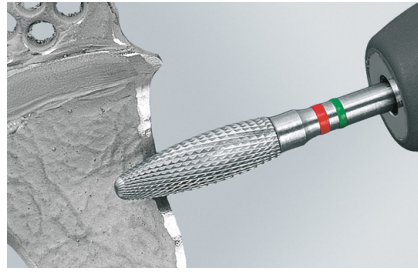
Time
Source: Testlab Komet, machine cutting test 2020



Aggressive and "hungry"
- Thanks to unique patented blade geometry

Maximum substance removal
- Totally new blade geometry
- No two blades are alike
- Intelligent combination of coarse and fine blades

Long service life
- Economic in use



H73SHAX.104.014



H77SHAX.104.023



H79SHAX.104.040



H79NEF.104.040



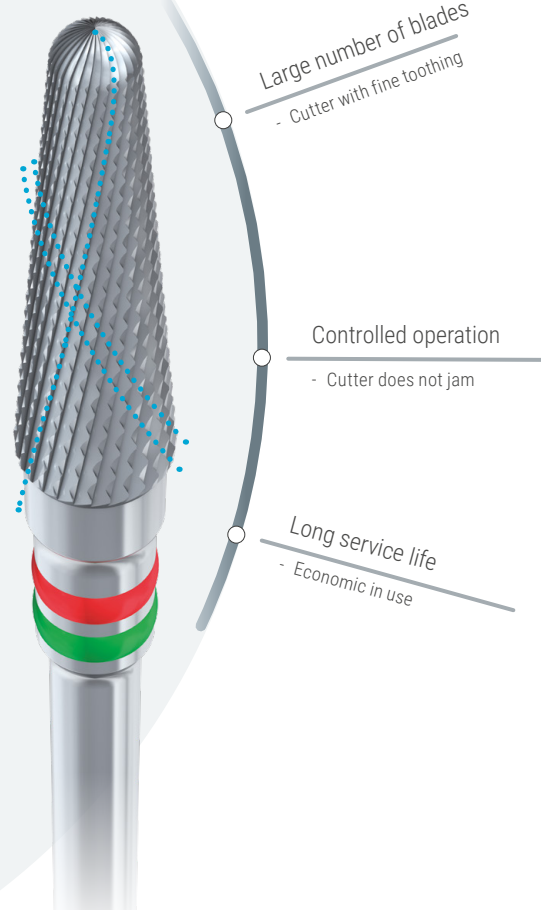
H129NEF.104.023



H139NEF.104.023

Recommendations for use:

- Optimum speed:
 $\text{opt. } 20,000 \text{ rpm}$



Work on metal. Titanium – GTi.



A cutter for bulk reduction.

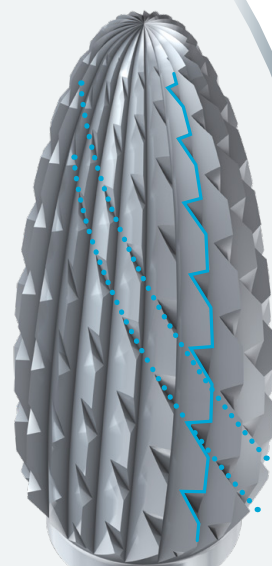
Titanium has become well established in the dental field. However, its specific properties used to cause dental technician genuine problems when working on titanium objects. Its extraordinary hardness and its low modulus of elasticity lead to increased heat generation and premature wear during cutting.



The GTi cutters were developed especially for work on titanium, and they decisively contribute to solving these problems.



These cutters owe their particularly aggressive cutting behaviour to their coarse staggered tothing and the smaller number of blades on their working parts. The result: Increased substance removal and a particularly long service life.



No clogging
- Large chip spaces

Aggressive cutting
behaviour
- Reduced number
of blades

Easy penetration
- Deep cross-cut



H79GTi.104.040



H89GTi.104.040



H129GTi.104.023



H139GTi.104.023



H251GTi.104.060

Recommendations for use:

- Optimum speed:
⌚_{opt.} 15,000 rpm



Caution:

Excessive speed leads to spark generation!

Instruments for left-handed operators.

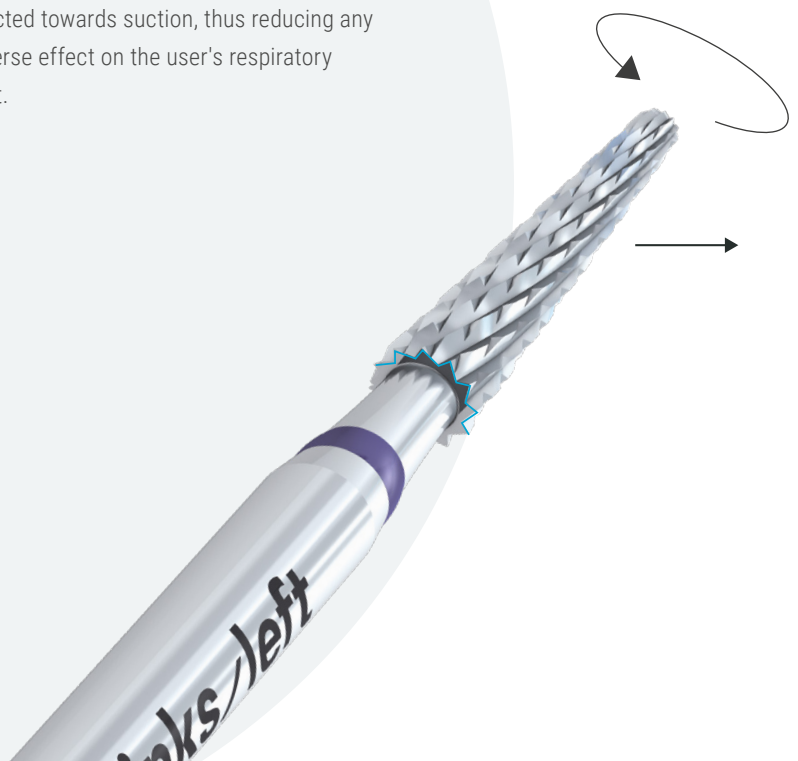
Ergonomic and pleasant work.

It's worth distinguishing between left and right.

Normally, whether an operator uses his right or left hand should not affect the effectiveness of his work and the quality of the achieved results. But not every tool is equally suited for right or left-handed users. Most cutters force certain, non-ergonomic methods of operation upon the left-handed user.

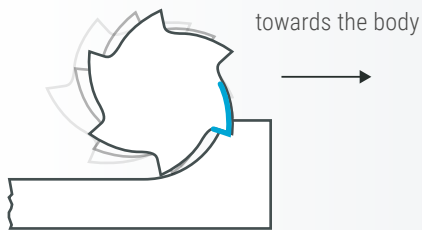
Special cutters designed to facilitate the work of left-handed operators.

For left-handed operators we offer assistance in the shape of our cutters with specially adapted tothing. The blades of these special cutters point to the left, which permits left-handed operators to work in an ergonomic manner, towards the body. The special tothing not only allows unobstructed view on the surface to be worked on, it also has a positive effect on the operator's health and the cleanliness of the work place. Chips are automatically directed towards suction, thus reducing any adverse effect on the user's respiratory tract.

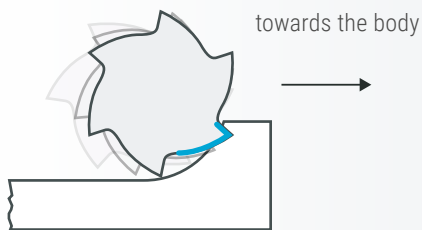




Standard cutter rotating to the left



Left-hand cutter rotating to the left



Did you know?

Despite the differences between the work methods of left and right-handed users, most instruments do not have to be specially adapted to left-handers. As diamond instruments, abrasives and polishers do not have defined blades with a front and a rear side, they can be optimally used in a clockwise as well as in an anti-clockwise direction.

Caution:

To prevent grinding discs or polishers coming off the mandrel during use, mandrels with left-hand thread are recommended. Contrary to standard right-hand threads which tend to loosen when used in a counter-clockwise direction, this special mandrel closes up during left-hand operation, thus permitting safe work.



Safety first.

Think safe ...
Work safe ...
Be safe ...

- Insert the instruments into the chuck as deeply as possible.
- Avoid jamming and using the instrument as a lever as this leads to an increased risk of fracture.
- Always wear safety glasses and suitable protective clothing.
- The larger the working part, the lower the speed.
- Always observe the recommended speeds indicated on the label.
- Excessive speeds have to be avoided at all costs (> 2 N).
- Use appropriate suction unit during cutting and grinding.
- We recommend to clean abrasive diamond instruments and grinding instruments with sintered bond (DSB) by means of our cleaning stone (9750) from time to time.

Speed recommendations for laboratory instruments

Material	Trimming	Polishing
Plaster	15.000	
Acrylics	15.000	6.000
Soft acrylics	15.000	
Soft denture bases	15.000	
Veneer acrylics	15.000	6.000
Precious metal high content of gold	15.000	6.000
Precious metal containing gold	25.000	6.000
Precious metal reduced content of gold	15.000	6.000
Non-precious metal alloys	15.000	6.000
Titanium	15.000	6.000
Model cast	15.000	6.000
Ceramics	25.000	6.000

© 10/2024 - 420546V0 opt. rpm

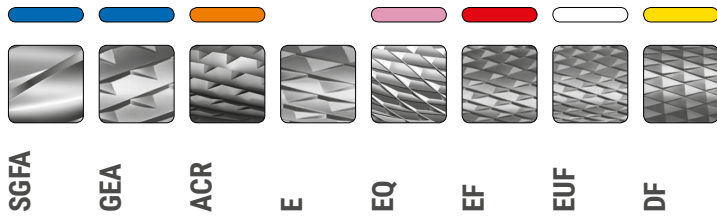
Compass | TC cutter

Recommendations for efficient use of tungsten carbide cutters in freehand cutting



	SGFA	GEA	ACR	E	EQ	DF	EUf	EF	NEF	UM	SHAX	NEX	GTi	UK	FSQ	GSQ	
Plaster opt. 15.000 rpm	coarse wet	coarse dry		medium dry													
Metals Speed according to material hardness: opt. 15.000 – 20.000 rpm	Precious metal alloys							fine	fine highly efficient	medium fine	coarse	coarse					
	Non-precious metal alloys					roughening	ultrafine	fine	fine highly efficient	medium fine	coarse	coarse					
	Model cast					roughening		fine	fine highly efficient	medium fine	coarse	coarse					
	Titanium							fine	fine highly efficient	medium fine	coarse	coarse					
Ceramics opt. 20.000 – 25.000 rpm														universal			
Acrylics opt. 15.000 rpm	Composite							fine						medium	universal		
	Denture acrylics														fine		
	Soft acrylics															universal	
	Acrylics for temporary appliances															universal	
	Bulk material reduction on wet plaster	Rough trimming	Removing excessive material, trimming	Correcting, smoothing of surfaces	Roughening of veneer surfaces	Fine correctors	Smoothing	Contouring, fine trimming	Trimming, contouring	Rough trimming	Rough trimming	Rough trimming	Contouring, trimming	Contouring, trimming	Contouring, trimming	Rough and universal trimming	

Recommendations for use



Safety toothing with basic twist to the left

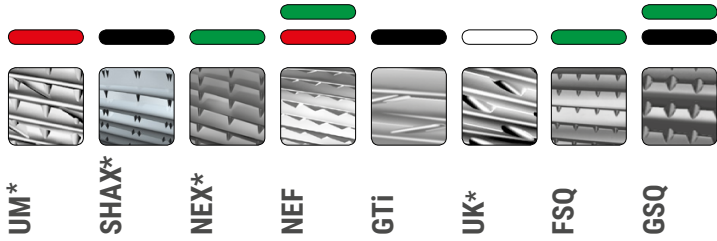
- ▶ Identified by the letter "A" and the blue colour code
- ▶ Retains the cutter safely in the chuck
- ▶ For safe work even at high speeds and great substance removal

The staggered toothing divides the instrument blades into individual, offset cutting segments:

- ▶ Short, granular chips that do not penetrate the skin
- ▶ Gentle work, almost without having to apply pressure
- ▶ Smooth, shiny surfaces

Toothing with pyramid-shaped cutting tips

- ▶ Cuts almost like an abrasive
- ▶ Finely roughened surfaces



Special triple toothing for metals

- ▶ Low contact pressure = smooth surface
- ▶ High contact pressure = increased substance removal

Very sharp toothing for hard metal alloys

- ▶ Minimum resistance to penetration when cutting hard and tough materials
- ▶ Low generation of heat
- ▶ Smooth surface

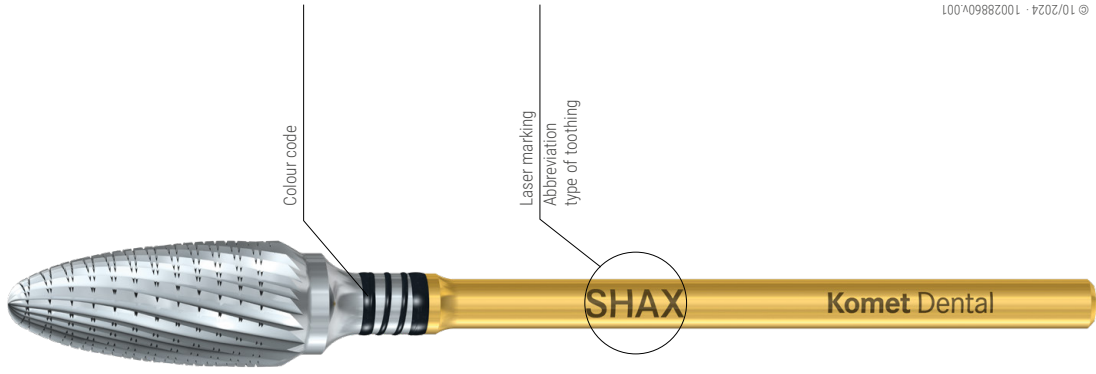
No clogging

Very sharp toothing (right/right) for veneer acrylics, ceramics prior to glaze firing and transition areas between metal/acrylics

Sharp toothing for acrylics with cross cut dividing the instrument blades into smaller segments

- ▶ Minimum resistance to penetration when cutting elastic
- ▶ No clogging
- ▶ **Attention:** Always work towards the body!

* golden shank



Hints for a long service life and effective work:

- ▶ **Speed:** Observe the recommended speed and a contact pressure of 2-4 N. The hand piece must rotate at a constant speed without variation.
- ▶ **Correct use/maintenance of the hand piece:** The cutter must be inserted right to the neck to guarantee perfect function. The chuck of the hand piece must be cleaned regularly. Change the chuck as soon as there are traces of wear on the shank of the cutter.
- ▶ **Maintenance of the cutters:** For efficient work, make sure to remove all residual metal chips from the blades. To clean clogged cutters, use a metal cleaning brush 9791 or 9785.





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