

# CERATIZIT

## Ultrasonic knife



CERATIZIT is a high-technology engineering group specialised in cutting tools and hard material solutions.

**Tooling a Sustainable Future**

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



**CERATIZIT**  
GROUP

# Solid carbide knives from CERATIZIT – the innovation for ultrasonic cutting

## Stable cutting processes for tough materials

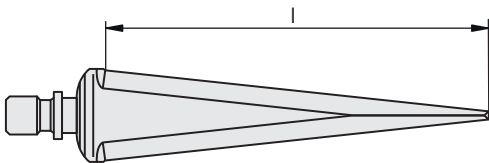
CERATIZIT offers innovative high frequency knives with a patented design, which are especially developed for tough applications like the ultrasonic cutting of composite materials such as honeycomb structures. Unlike the standard version from other manufacturers (brazed tools with steel connection and Tungsten Carbide blades), our knives are solid carbide tools. Thanks to this innovative and successfully tested technology, our knives stand out by:

- ▲ More rigidity
- ▲ A better response when in vibration
- ▲ A higher consistency in quality and response when in vibration.
- ▲ Patented knife design

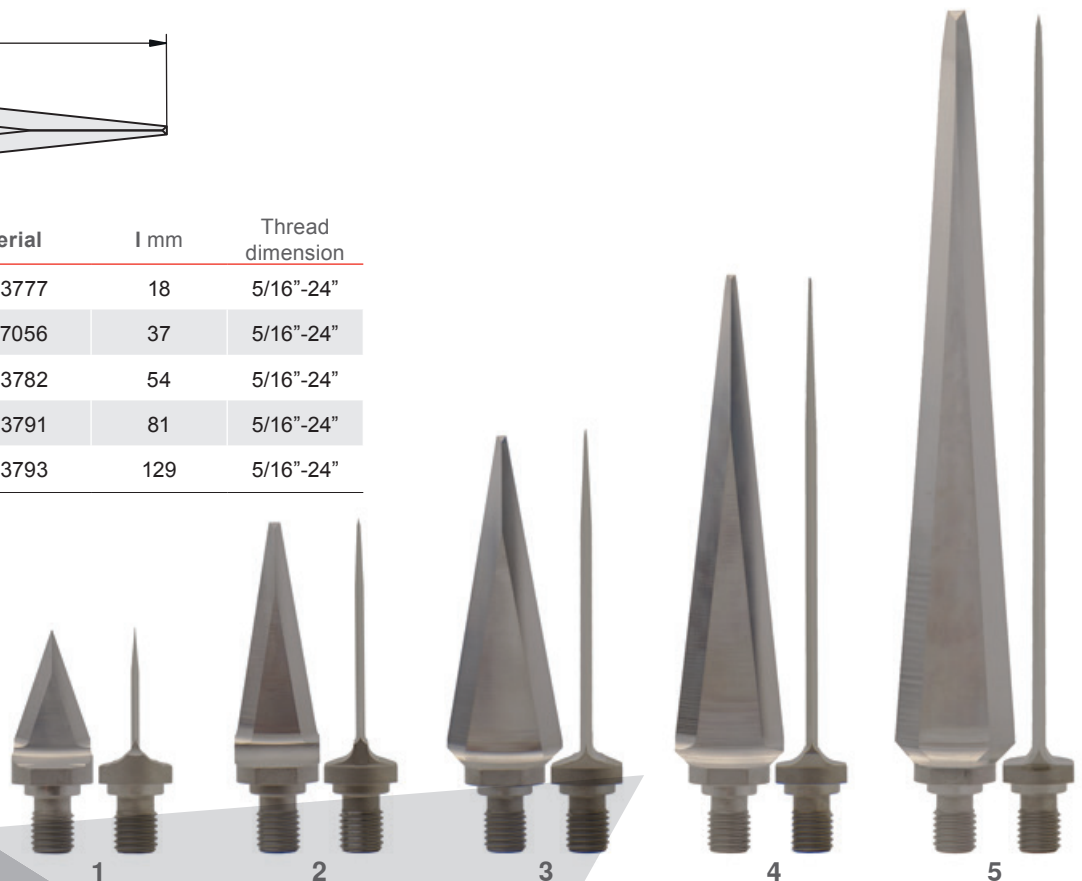
## Carbide grade

CERATIZIT grade code	ISO code	FDA	Grain size	Binder [%]	Density [g/cm <sup>3</sup> ]	Hardness		Transverse rupture strength [MPa]	Thermal conductivity [W/(m·K)]	Thermal expansion coefficient [10 <sup>-6</sup> ·K <sup>-1</sup> ]	Modulus of elasticity [GPa]
						[HV10]	[HV30]				
CTS18	K20-K40	yes	submicron	9.0	14.55	1610	1590	3650	74	5.1	586

## Carbide knives product portfolio



Type, description	Material	l mm	Thread dimension
Product 1, CTS18	14853777	18	5/16"-24"
Product 2, CTS18	12597056	37	5/16"-24"
Product 3, CTS18	14853782	54	5/16"-24"
Product 4, CTS18	14853791	81	5/16"-24"
Product 5, CTS18	14853793	129	5/16"-24"



# Your benefits at one glance

## Single-source production

We master the entire process chain from the raw material to the finished tool and thus, we can always guarantee a stable and high quality.

## Application-oriented research and development

For the solid carbide knives, we have developed a specific Tungsten Carbide grade with an improved relation of hardness, toughness and transverse rupture strength.

## Individual solution expertise

On top of our standard portfolio, our engineering team can work with OEM's to develop individual solutions for each ultrasonic cutting system. Please contact us for an informal discussion on how we can support you!

## High class engineering

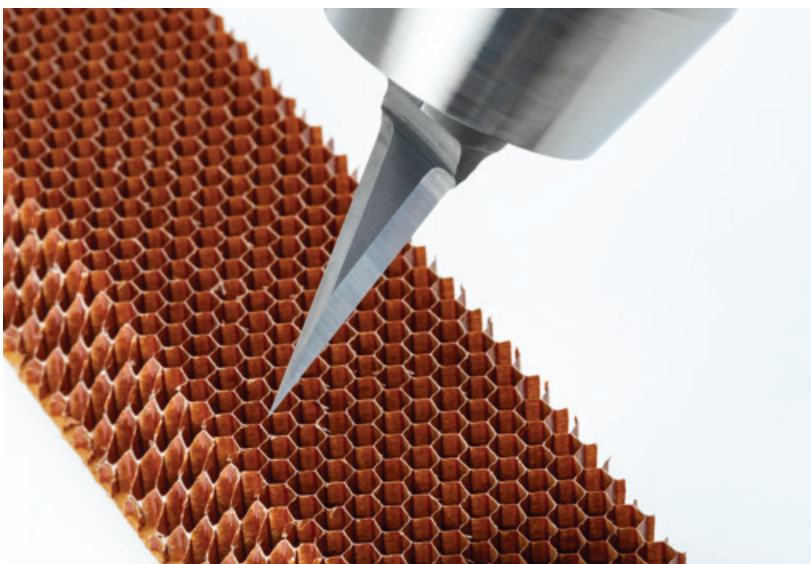
We guarantee a highly stable and precise cutting process thanks to:

- ▲ Solid thread connection with improved tightening torque resistance
- ▲ Accurate execution of every cutting edge for improved sharpness
- ▲ Accurate dimensional inspection after every production step

It goes without saying that the knives have been tested successfully under real-life and severe cutting conditions.

## Optimised production

Thanks to our assimilated production process and accurate inspections, we offer knives with near net shape and the highest sharpness on the market.



## Headquarters

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## Sales site

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