

# Hard materials in top form

## Innovative solutions for tool manufacturers



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

# Dear customers,

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

As a privately owned company, based in Mamer, Luxembourg, we develop and manufacture highly specialised carbide cutting tools, inserts and rods made of hard materials as well as wear parts.

We put our knowledge and innovative imagination to use on a daily basis for the success of our customers, taking account of what are for us the most important aspects of **material efficiency** and **conservation of resources**.

As the global market leader in a variety of application segments the CERATIZIT Group continuously develops new carbide, cermet and ceramic grades.

You can benefit from outstanding product quality and a broad, innovative product assortment which meets the highest expectations of the modern precision tools industry.

## CERATIZIT Group facts & figures



**1 headquarters**  
Mamer, Luxembourg



**33**  
production sites



**> 50**  
sales subsidiaries



**> 9,000**  
employees



**> 100,000**  
different products



**> 1,000**  
patents and utility models



**> 200**  
employees in R&D



**> 10**  
innovation awards



**30%**  
new products created in the last 5 years

# Passion for cemented carbide

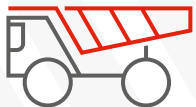
## From the ore to the ready-to-use tool

CERATIZIT is one of the few carbide manufacturers who manages the entire process chain single-handedly: from mineral extraction to the ready-to-use product.

In the different areas that are involved, our highly qualified experts are familiar with every single step of the production process. With our ultra-modern machine park and great manufacturing depth, we guarantee that you will be able to count on a strong partner.

To ensure the high quality of our products and the environmental friendliness of our production methods, our processes are certified to DIN ISO 9001 standards.

What this means for you is that you will find the sum of all the skills of the entire CERATIZIT Group combined in each one of our products.



Mineral extraction



Preparation and mixing of the raw materials



Forming/pressing



▼ CERATIZIT produces more than a hundred carbide grades. In order to optimise different characteristics, like hardness, toughness or transverse rupture strength, the cobalt quantity and the WC grain sizes vary. This is a challenge by which we are driven every day. ▲



▼ The production of a cemented carbide blank is teamwork. First the powder mixture is pressed to make the blank, then the blank is machined and finally sintered at temperatures ranging between 1,300 and 1,500 Celsius and at a pressure of up to 100 bar. ▲



Sintering



Grinding



Quality assurance




Dispatch



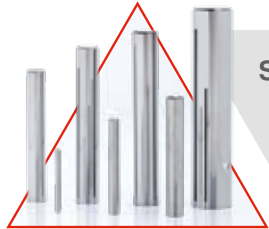
*To make you fully equipped for the future, we subject our carbide grades to ongoing development and improvement and continue to extend our product portfolio at all times.*

**– Johannes Glätzle**

 TRUCK SOLUTIONS BY  
**CERATIZIT**

# Ideal product variety – for your tool production

## Carbide rods, preforms and brazing tips



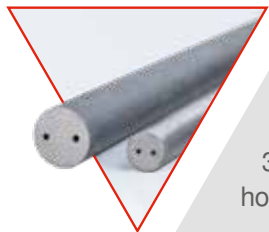
### Solid carbide rods

Solid carbide and cermet rods in various grades and sizes. As sintered or mirror-polished (h6/h5), in metric or inch dimensions,  $\text{Ø}$  1.00 – 46.2 mm and a standard length of 330 mm. Available from stock.



### Preforms

Customer-specific blanks, based on your individual specifications. Near net shape production of blanks and semi-finished tools for solid carbide tools and PCD tools, systems with replaceable heads or tool shanks. Minimum delivery times.



### Rods with straight coolant holes

Cemented carbide or cermet, as sintered or ground (h6),  $\text{Ø}$  3.3 – 34.3 mm, standard length 330 mm, with two parallel or one central coolant hole. Available from stock.



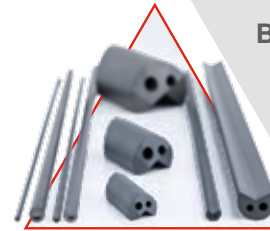
### High-precision drill blanks with through-coolant

Semi-finished tools for the production of DIN 6537 drills with through-coolant. Ground to h5 with maximum geometric precision. Blanks for micro-drills starting from cutting edge diameter 0.5 mm.



### Rods with helical coolant holes

$\text{Ø}$  3.0 – 35.0 mm, two, three or four coolant holes, helix angle from  $15^\circ$  to  $51^\circ$ , standard lengths up to 530 mm. Available from stock.



### Blanks for gun drills

Rods and profiled rods and tips for the manufacture of gun drills made of solid carbide and carbide-tipped gun drills. With kidney-shaped coolant hole or two straight coolant holes.



### Square and rectangular strips, brazing tips

For brazed tools and other applications.



### End mill blanks

Ground milling cutter blanks in various sizes. Precision-ground with excellent accuracy of dimension and form. With or without through-coolant and carbide grades adapted to the specific application.

# We provide the carbide blank – you do the finishing

## Our big standard range of carbide rods

With over 1,100 products, Toolmaker Solutions by CERATIZIT offers you one of the biggest standard ranges of carbide rods in the world.

Choose from a unique spectrum of carbide grades with a huge variety of properties which have been specially developed to meet the needs of your applications.

- ▲ Ultrafine grades for the machining of superhard materials
- ▲ Submicron grades for universal application
- ▲ Cermet grades for the finishing of ferrous materials

An extensive range of products with or without coolant holes, in a variety of tolerances and dimensions, emphasises our product variety. Availability at all times is a priority for us. This means you can order the product you want quickly and easily online.

When this big standardised product assortment doesn't have the answer, we come up with creative suggestions to meet your needs. Customer-specific projects allow us to show the full extent of our experience, customer-focus and development skills.

*You can always count on getting the right solution for your application – and what is more, with an excellent cost-benefit ratio.*

– Christian Buschneg





### **E-Techstore**

- ▲ Standard products available from stock
- ▲ Live product availability check
- ▲ Detailed up-to-date technical information and graphic illustrations



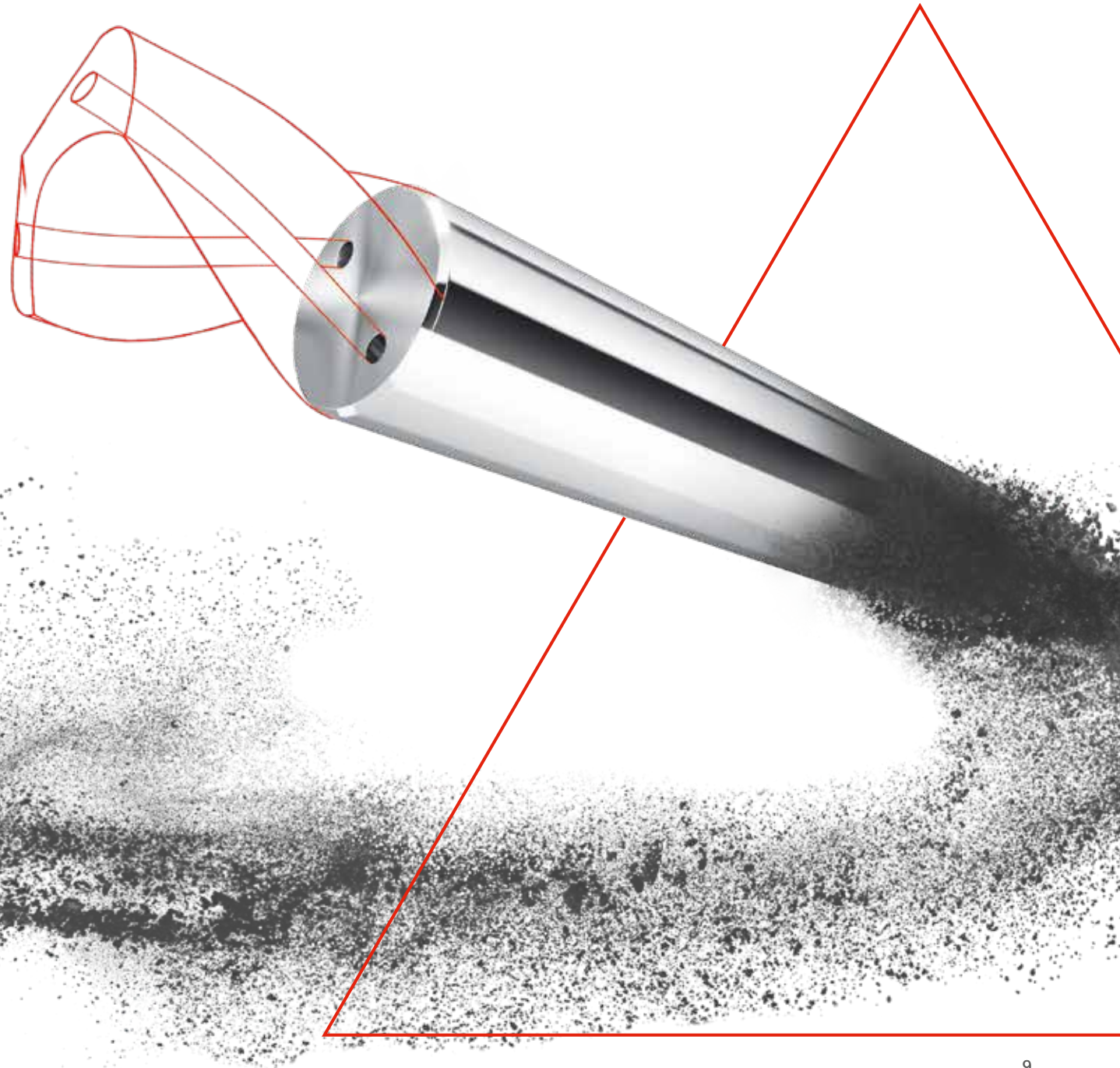
### **Speedy delivery**

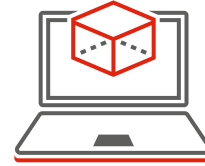
- ▲ Orders up to 6.00 pm CET will leave our warehouse on the same day
- ▲ Punctual delivery: we work with the best and most reliable transport service providers



### **Individual expertise in solutions**

- ▲ Experts with the highest technological qualifications will advise you personally on selection of the carbide grade most suitable for your tools





### **Individually designed to meet customer requirements**

- ▲ You can also count on receiving customised blanks and semi-finished tools for the production of rotating cutting tools
- ▲ Production is based on an individual design, in keeping with the customer's drawings
- ▲ We will be happy to advise you on the wide range of options, and help you select the best grade for your application



### **Production expertise**

- ▲ Decades of experience in combination with ultra-modern production facilities and highly qualified personnel make us the experts when it comes to the machining of blanks
- ▲ With the help of our innovative production resources, even complex geometries can be manufactured in near net shape at the shortest notice
- ▲ We have the expertise and are familiar with the specifications, like the allowances and sintering tolerances, and so can achieve maximum accuracy in the final product



*We don't just sell you a product, we are with you every step of the way and support you with our expert technical knowledge.*

*– Dieter Hosp*



## You define the product – we shape efficiency

### Customised preforms and semi-finished tools for rotating cutting tools

Occupying a leading position for carbide processing, powder pressing, blank machining and sintering, CERATIZIT has the best qualifications for the manufacture of near net shape blanks.

Our expertise is the basis for the supply of precise blanks for solid carbide and PCD tools, as well as systems with replaceable heads and tool shanks.

Blank variations with preformed chip grooves and insert seats? With individually designed coolant exit holes? With threads, male or female centres or ground?

For all or any of these, CERATIZIT is your reliable partner.

# Rods and preforms for every price segment

## Three product lines for carbide rods

Based on your requirements, when it comes to tool production you can choose from three different product lines:



Our **p-line (Premium)** stands for high-performance carbide: this product line offers you the largest selection of grades and finishes worldwide for maximum performance in every application area. Our p-line products are exclusively manufactured using carbide grades which are produced at our company sites in Reutte, Austria, or Warren, in the USA.

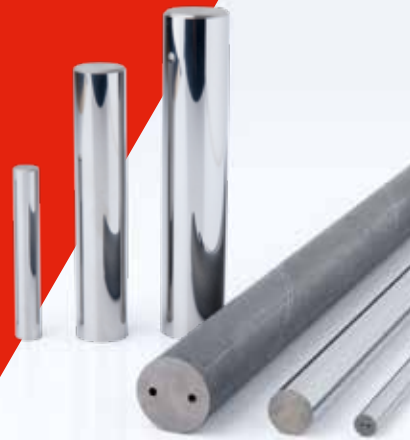
- ▲ 12 standard grades available from stock (ultrafine, submicron, fine, cermet)
- ▲ More than 1,100 stock items
- ▲ Near net shape preforms available based on customer drawings
- ▲ Specialities available upon request



# p-line

Our **e-line (Economy)** offers you acknowledged industrial quality at an excellent price-performance ratio, with the products being manufactured by our joint venture partner CB-CERATIZIT in China and Taiwan. CB-CERATIZIT has over 30 years of experience in carbide production and a quality management system certified to ISO 9001 standards.

- ▲ Two standard grades available from stock (10% Co, submicron)
- ▲ Solid rods, rods with coolant holes and end mill blanks available in various executions



**e-line**

Use our **s-line (Solid)** to produce high-performing standard tools made of high-quality secondary raw materials. This product line includes solid rods, end mill blanks and rods with helical coolant holes which are all manufactured at our production site in Reutte, Austria.

- ▲ Ideal for the efficient production of standard tools
- ▲ One standard grade available from stock (10% Co, submicron)
- ▲ More than 100 stock items



**s-line**



**PRODUCTION RODS & PREFORMS**  
 CERATIZIT USA  
 Warren

**HEADQUARTERS**  
 CERATIZIT Luxembourg  
 Mamer

**PRODUCTION RODS & PREFORMS**  
 CERATIZIT Austria  
 Reutte

**PRODUCTION RODS & PREFORMS**  
 CB-CERATIZIT China  
 Xiamen

**CERATIZIT Group**

- Headquarters
- Production & Sales
- Production
- Sales

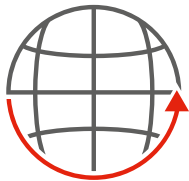
**CB-CERATIZIT**

- Production & Sales
- Production
- Sales

## Worldwide service

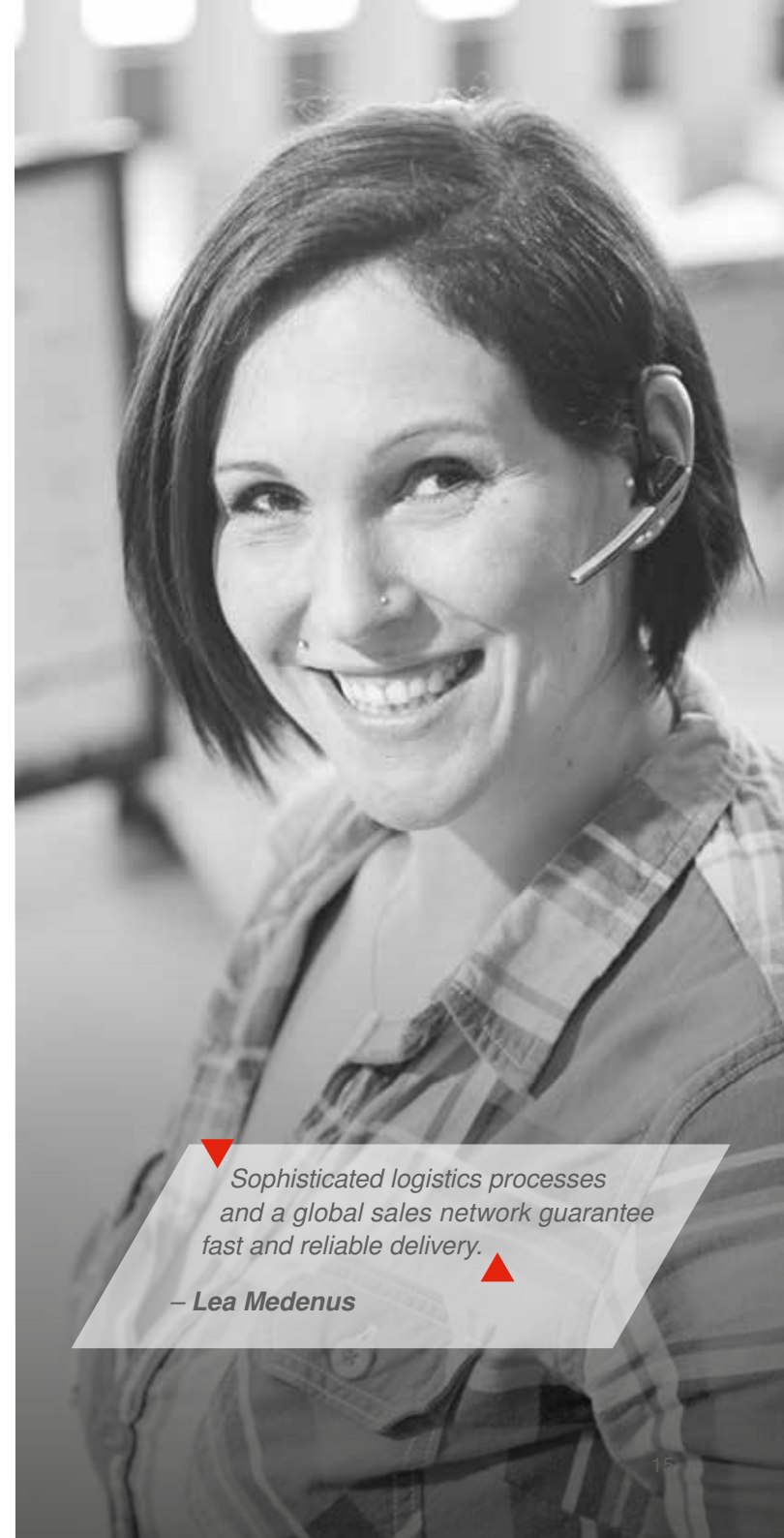
CERATIZIT's quality products are available to you all over the world at any time. You can order stock products without any problem 24/7 online from our E-Techstore, and take advantage of the technical expertise of our sales and office staff. An optimally stocked warehouse and our high and flexible production capacity for stock products, special products or high production volumes ensure that your order will always be dealt with swiftly and reliably.

Wherever you are located – with over 50 branches in Europe, America and Asia, we are only a stone's throw away in all parts of the world.



*Sophisticated logistics processes and a global sales network guarantee fast and reliable delivery.*

*– Lea Medenus*



**Headquarters**

**CERATIZIT S.A.**  
LU-8232 Mamer  
**T.** +352 31 20 85-1  
**E.** [info@ceratizit.com](mailto:info@ceratizit.com)

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

**CERATIZIT Austria GmbH**  
A-6600 Reutte  
**T.** +43 5672 200-0  
**E.** [info.austria@ceratizit.com](mailto:info.austria@ceratizit.com)

