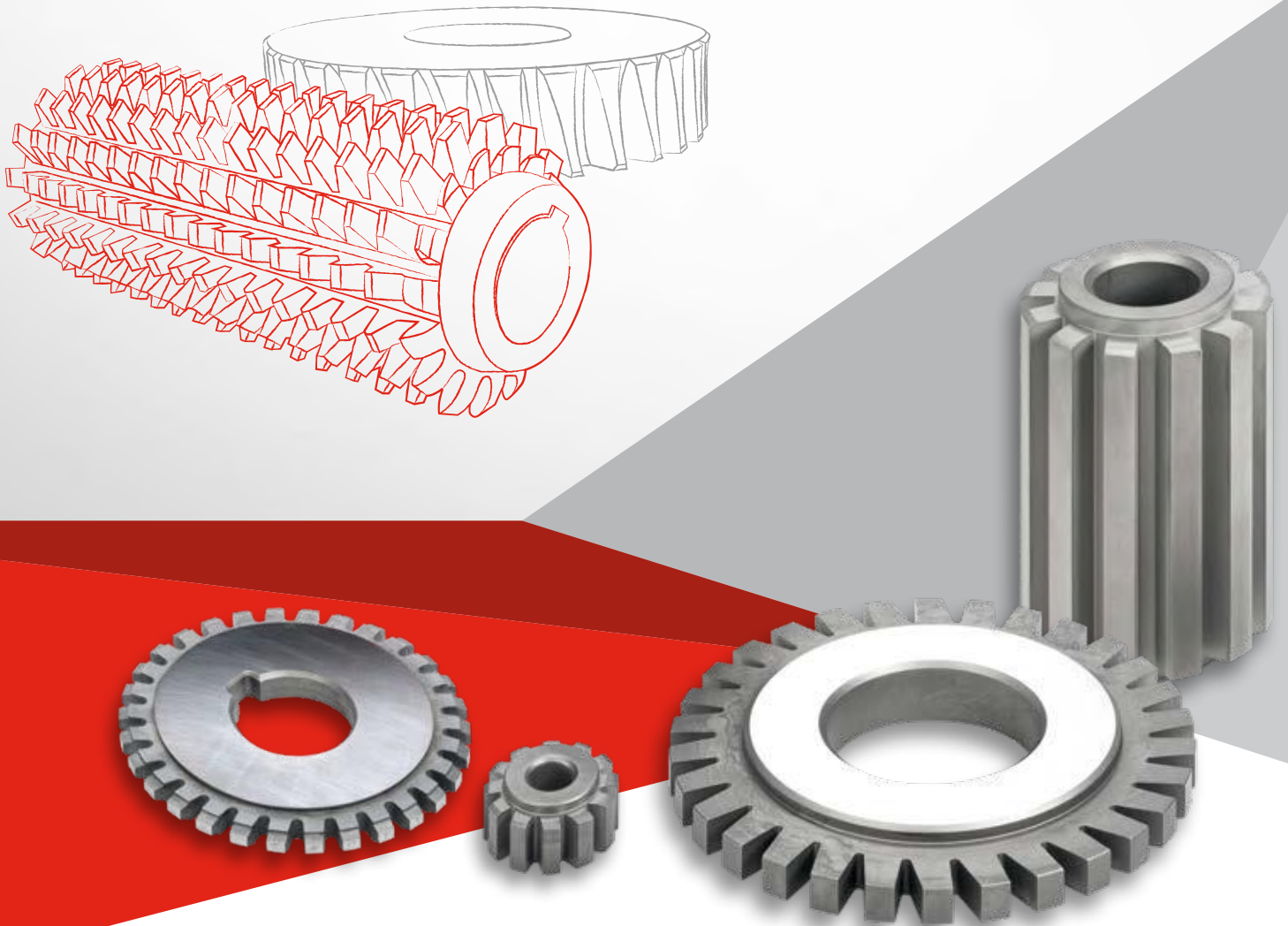
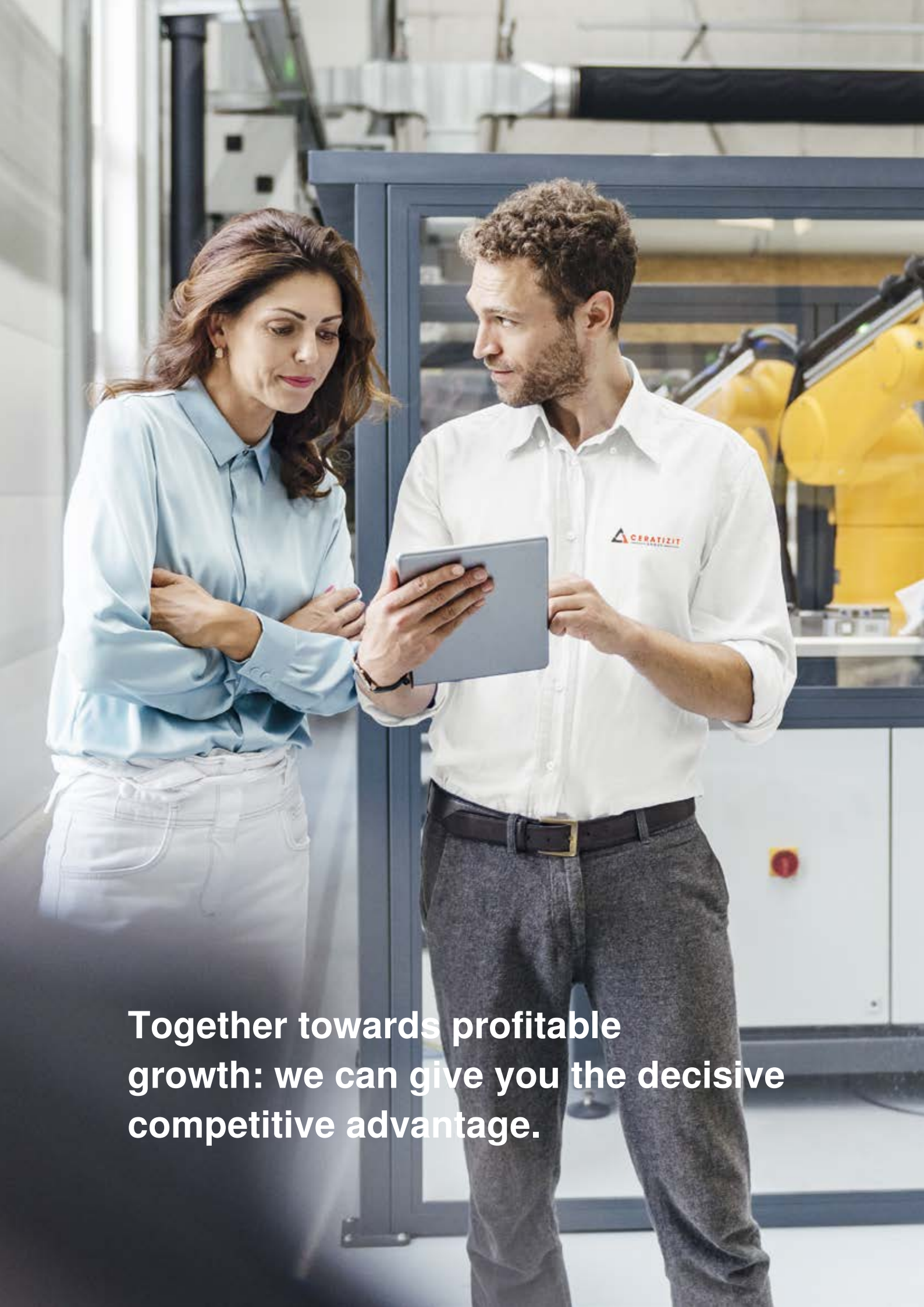


Hob milling with cemented carbide





Together towards profitable growth: we can give you the decisive competitive advantage.

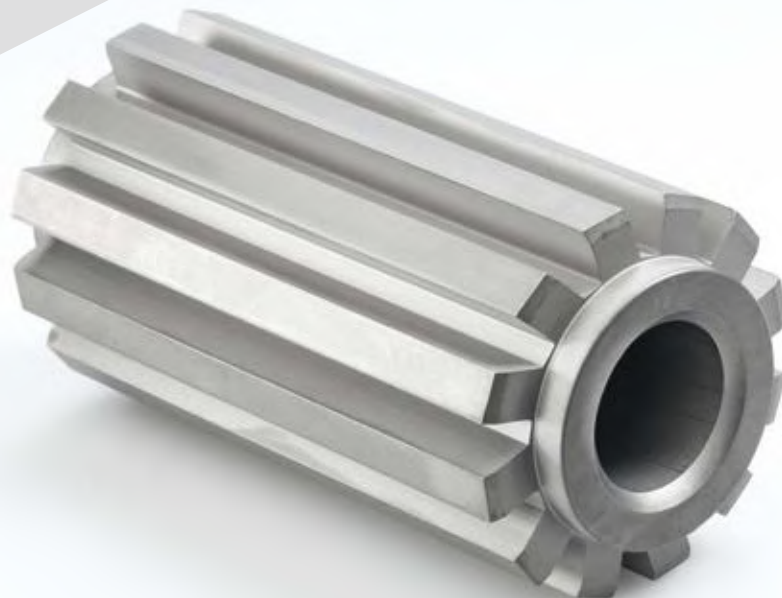
Maximum efficiency for gear wheels – with carbide blanks for the hob industry

As a tool manufacturer you naturally expect only the best: to get the solution you need for the cost-effective production of gear wheels just when you need it. CERATIZIT specialises in the production of hobs, and offers you favourable delivery times and customer-specific carbide blanks for hobs, peel milling cutters and gear cutters which guarantee a consistently high metallurgical quality at all times. And to ensure that 'customer-specific' is not just an empty phrase, our team in Empfingen in South Germany will assist you as partners right from the first contact.

Passion – precision – process reliability

Whether you make delicate gear wheels for the watch industry, supply the automotive sector or produce gear wheels for special gears – the experts at CERATIZIT can develop exactly the product you need. Working with you as partners we will create your carbide hobs for large-batch and high-volume production. As a leading carbide manufacturer our expertise covers the entire process chain of cemented carbide production, up to provision of the blanks which are of course delivered just in time to your production department.

Benefit from maximum process reliability while increasing production efficiency on a permanent basis – with hobs from CERATIZIT.



Advantages and benefits



Advantages

Benefits

Online configurator in the E-Techstore for automated blank production around the clock



Immediate preparation of a quotation, time saving

Near net shape for the minimum possible grinding allowance, close sintering tolerances



Speedy and economical processing thanks to reduced grinding work

Premium carbide grades for maximum tool life



Longer service life = reduced payback time

Higher cutting speeds compared to steel or PM steel



Faster gear wheel production

5-axis machining



Reliable production of the most complex geometries

Stock management and production procedures **specially tailored to hob blanks**



The optimised process chain guarantees minimum delivery times.

Hobs are also suitable for dry machining



Versatile application of CERATIZIT blanks for hobs

Fine-grain grade CTF20D:
Higher toughness (K_{IC} value)



Fewer cutting edge chippings, with more demanding manufacturing conditions. This ensures a more stable process and at the same time, a longer service life.

Fine-grain grade CTF12D:
Optimized ratio of hardness to toughness



Fewer edge chippings due to increased toughness, even when 6 %-Co carbide grades are used.

Dialogue – efficiency – progress

Our online configurator makes ordering of hobs a revolutionary experience. In just a few steps you can now create your individual blank here, when and wherever you wish. Alternatively, you can of course still send us a drawing which will be used as a basis for your individual calculation and for the **design of your near-net-shape hob blank**. This minimises the costs for you – efficiency starts right away with the enquiry, and continues well into the production process.

As a result CERATIZIT products offer the ideal conditions for **final products with a perfect finish**. Ultramodern cutting machines can handle **even the most demanding gear geometries**, in batch sizes between 1 and 250 items. We stand for more **customer benefit** in gear wheel production – with premium hobs from one of the world's leading carbide experts



Preform

Sintered part

Choose from the following options

Not only are hobs highly productive, they are extremely flexible. Any number of teeth, all kinds of profile displacements and any inclination angle you specify can be obtained.

One challenge, one solution and one choice: CERATIZIT.

Shank-type hobs with gashes

Internal product code: WFSN



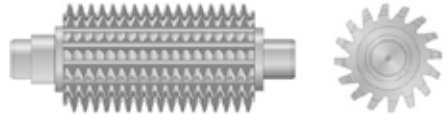
Hobs with bore

Internal product code: WFBN



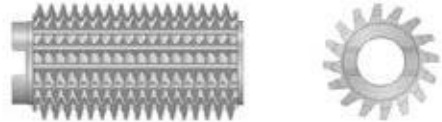
Shank-type hobs with gashes and thread

Internal product code: WFSG



Hobs with bore, gashes and thread

Internal product code: WFBG



Gear cutters

Internal product code: ZFBN



Skiving Tools

Internal product code: Shank type: SFS

Type of bore: SFB



Hobs in a new light – from CERATIZIT!

Ordering description for hobs

WFSG 065-203/150-16 CTS20L

a	b	c				
(a)			External diameter in mm (rounded to nearest mm)	Total length (rounded to nearest mm)	Cutting edge length (rounded to nearest mm)	Number of gashes
WF.. hobs						Carbide grade
ZF.. gashing						
(b)						
S shank						
B bore type						
(c)						
N gashes, neutral without thread						
G gashes with thread						
(*) Special hobs based on drawing						

* Additional information

Manufacturing options of hob blanks

	CTF20D	CTF12D
Grain size	fine	fine
Hardness HV10	1550	1750
Fracture toughness MPa·m ^{1/2}	11,2	9,9
Transverse rupture strength Mpa	3500	3200
Hard milling > 58 HRC	×	✓
Soft milling < 58 HRC	✓	×



Online configurator – the benefits of automation

With its online configurator, the E-Techstore now offers new possibilities. You can build your individual hob blanks very easily with just a few clicks. Try out the new configurator feature in our E-Techstore online shop, when and wherever

you want! Benefit from automated quotations to your exact conditions. You can then save your configuration for later processing and final ordering, or order directly!

Your order in just a few steps

Enter the finished dimensions of the requested hob.



You will immediately receive the offer for your blank (can be saved online or offline).



You can order either directly, or else later, when you receive the order from the end-user.



Your benefits at a glance

▲ Complete flexibility and unimaginable celerity

Receive your quotation around the clock, after just a few clicks in our E-Techstore. Our configurator designs the blank for your hob, calculates the price and offers you a customised product, all on a fully automated basis.

▲ Easy data input and quick checking

The configurator defines your product in an easy and intuitive way. By visualising the 2D drawing together with the entered dimensions, you can check your input quickly and reliably by comparing the sketch of your enquiry with the displayed drawing.

▲ New networking possibilities

Our configurator prepares the routing, the bill of materials and a 3D model including a 2D drawing of the ordered blank. Based on this networking, our production kicks in only a few moments after your order has been

placed. Upon request we can send you the 3D model (STEP) and the 2D drawing (PDF) within one hour. So the drawing can be approved within a short time and your article defined in your CAD data from the blank right through to the finished product.

▲ Tooling the Future

The online configurator has created the basis for fully automated order handling. On the road to paperless production, product definition based exclusively on 3D data and many other interim goals associated with networked production we are one step ahead.

Premium carbide for reliable processes

Your premium carbide solutions withstand the highest loads while showing little wear. For the production of customer-specific hobs CERATIZIT offers a number of carbide grades. Based on the geometry and application, we will be happy

to offer you the optimum grade. All cutting edges of our hob blanks are extremely stable thanks to the very homogeneous carbide, which guarantees reliable processes.

Application fields

Hobs may be used for example for the production of gear wheels, worm wheels or gear racks in the following sectors:

- ▲ Automotive
- ▲ Mechanical engineering
- ▲ Watch industry
- ▲ Power engineering



Hard Material Solutions

Hard cases are our speciality

We are your ideal partner when it comes to high-quality hard materials for production processes, tool manufacturing and wear protection.

From standard products to tailor-made solutions, from massive components to minute parts, from the blank to the fully finished product – a product that meets the highest standards of precision, surface treatment, and user-friendly assembly – our carbide and ceramic solutions

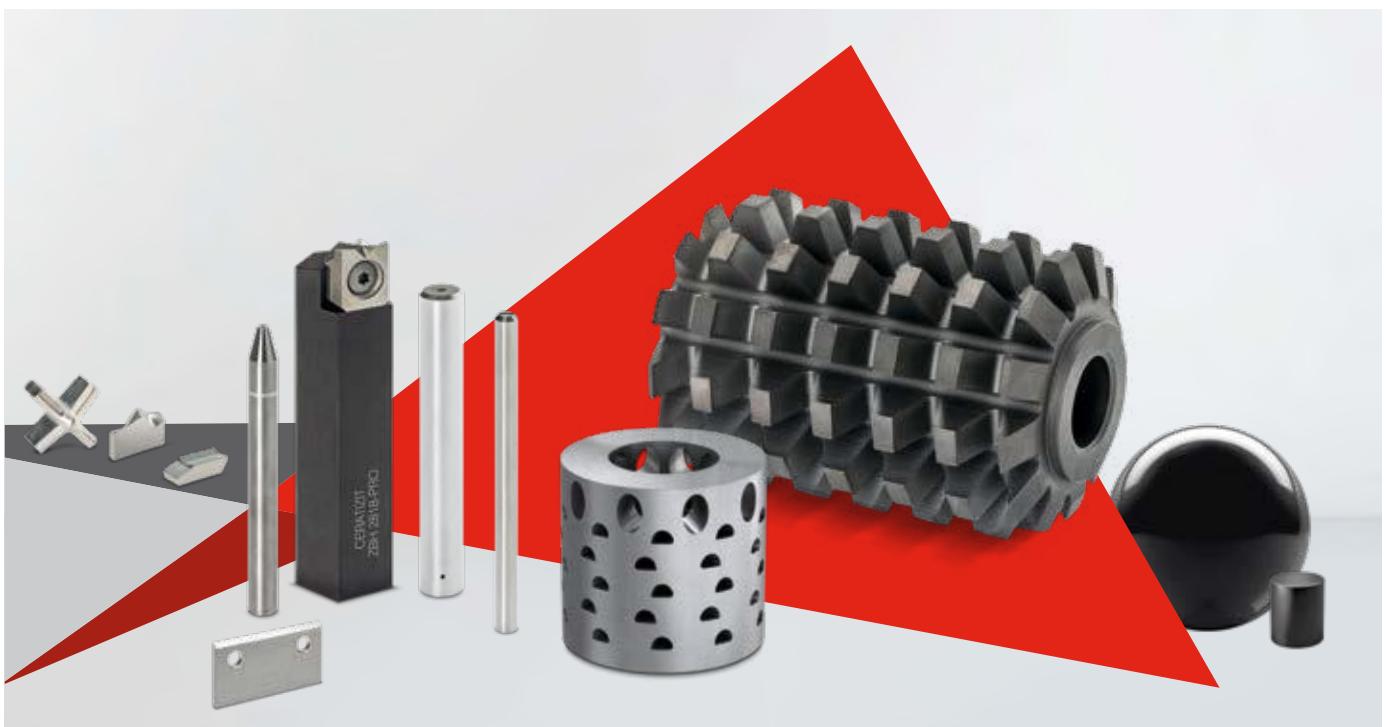
ensure improved efficiency and outstanding total cost of ownership. This is the case in a variety of application fields and industrial sectors. Even when subjected to extreme stress, our cemented carbides are notable for the high flexibility they offer in numerous industries. Our products are specially designed for extreme working conditions, making our Hard Material Solutions impressive tools for optimising your processes and increasing wear resistance.

Product portfolio

- ▲ Blanks and semi-finished products
- ▲ Water-jet cutting
- ▲ Hob milling
- ▲ Drawing tools & drawing nibs

Solutions for:

- ▲ Tool & die
- ▲ Fastening industry
- ▲ Injection technology
- ▲ Health industry
- ▲ Plastics industry



CERATIZIT Group

For over 95 years,

CERATIZIT has been a pioneer in developing exceptional hard material solutions for cutting tools and wear protection.

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


The CERATIZIT Group is the global 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 industries.

Facts & figures


 **Headquarters**
Mamer, Luxembourg

 **30** more than
production
sites


 **8 000** more than
employees

 **80** more than
countries in which
we are active

 **1 00 000** more than
products

 **1 000** more than
patents & utility models

 **2 00** more than
R&D employees

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

 **14** more than
innovation
awards

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