

Together for your success

2020 EN

CERATIZIT Service Solutions



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

Tooling the Future

ceratizit.com



You imagine it – we make it.
Superior carbide quality coupled with
the largest production capabilities,
extensive expertise and experience
and outstanding all-around service.
That's the CERATIZIT Group.

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Dear customer,

CERATIZIT is the acknowledged global leader for developing and manufacturing innovative carbide solutions. But we are so much more than just a regular component supplier. Thanks to our state-of-the-art services, we are your perfect partner if you want to be always one step ahead of the competition. You can count on us always to meet your needs and expectations with a high quality service level.

Your challenge, our solution

Precision, hardness, reliability: these are the characteristic features of our Hard Material Solutions for processes ranging from sawing to casting and drilling. Wherever they are used, our cemented carbide and ceramic solutions combine resistance and wear protection to ensure reliable, optimised and stable processes. This enables us to guarantee you the high productive performance you require for all your applications.

Supplying solutions, not just products: our best-in-class services for the industry

The complex world of cemented carbide offers innumerable application possibilities and holds vast potential. Our quite extensive IT tools are ideal for tapping this potential, for example in connection with configurators and digital interfaces. We are also convincingly engaged with forward-looking issues like sustainable recycling, application engineering and additive manufacturing. And we are happy to share our knowledge, offering comprehensive customer support and consulting services. Best-in-class logistics and specific supply options add the final touch to our service package.

We offer both standardised and customised services, so they match your individual needs in the best possible way. Contact us to find out how we can support your business: together, we will analyse your situation and discuss which services are suitable to add value to our partnership.

Thanks to the extensive skills, capacities and experience within the entire CERATIZIT Group, we are able to offer you the outstanding quality you are accustomed to. Contact us to find out how and on what terms we can support you.

Innovative carbide solutions =
Premium products +
Best-in-class
services

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

Product engineering

We at CERATIZIT create competitive advantages for our customers through the setting of new technological standards and development of innovative materials and coatings, as well as unique carbide products. We invest continuously in fundamental research, process technology, product development and application technology. As a technological frontrunner in the carbide industry we hold over 1,000 patents worldwide and employ more than 200 experts in Research & Development. We also cooperate with universities and leading research institutes across Europe. Our specialised engineering teams consult with you to develop your tailor-made carbide solutions – perfectly fitted to the needs of your application. From the ore to the finished product, we are one of the few carbide manufacturers that manage the entire process chain, and so can always guarantee consistent and excellent carbide quality.

We offer a great variety of manufacturing processes such as pressing, extrusion, shaping, grinding, steel/carbide assemblies, steel/carbide brazing, steel/carbide shrinking, steel/carbide laser welding and – our latest innovation – additive manufacturing of cemented carbide. This diversification allows us to produce parts weighing less than 1 g (e.g. balls, surgical pliers, saw tips etc.) as well as 700 kg products for crushing or recycling parts. We can manufacture products ranging from one-off specimens to large series, from raw sintered to fine ground (micron precision) – the possibilities for creating your perfect product are endless.

By working with us, you get the best of everything!



Grade and design development

Your key to success for customised solutions

With our development team, you will always get the best solution for your requirements. You can count on us to come up with the best grade, design and process recommendations for your application. All our development services are of course supported by our internal

analytical centre with its state-of-the-art equipment. Whether you work blanks, semi-finished, finished or coated pieces – we are your partner for grade and design development in the carbide industry.



Our service

▲ Application engineering consulting

Choosing the right carbide grade from our large portfolio with the optimal properties for your application, improving the design of your product and adapting your process – we offer a 360° service when it comes to optimising your production and maximising your profitability.

▲ Development and industrialisation

Both customised grades and designs will of course be tested extensively in a real environment and further developed for specific applications in consultation with you and our product management team.

▲ Optimisation of your product design

Thanks to FEA (Finite Elements Analysis), virtual components can be calculated on the computer; deformations and stresses under the influence of a variety of forces are simulated. These so-called virtual prototypes help to save development time and costs well before actual production, as possible design errors can be detected and avoided in advance.



Your benefits

▲ Together with you, we optimise your tools and components for your individual application so that you can maximise your profitability.

Whether you wish to optimise your semi-finished parts for faster and cheaper further machining, or your finished tools to improve performance in terms of wear resistance, tribology and chemical/thermal resistance – we will gladly tackle any challenge with you.

Reverse engineering

Boosting your productivity

Our engineering team is always at your service, carefully listening to your needs and proposing a solution. We analyse, study and propose solutions to improve an existing carbide sample or to replace a steel part. Be it for a simple pricing request, or a long-term

project to develop a solution that maximises your profits – we are your perfect choice when you are looking for a carbide engineering partner.



Our service

▲ The basis for the right choice

Our engineering team will provide you with a complete study, with laboratory reports, price offers and all the different options available, on the basis of which you can choose the most profitable solution.

▲ Ready-to-go solutions

At your request, we can carry out a study (e.g. based on a sample), bring it to industrial realisation and give you a turnkey solution to outperform your competitors.

▲ Our experts are always on hand

Our engineering team provides you with excellent technical support and is always at your disposal for any questions – from a price request to the delivery of the parts.



Your benefits

▲ Excellent technical support

Thanks to the huge number of specialists within the CERATIZIT Group and its networking with universities and other scientific partners, you benefit from multi-disciplinary information about metallurgy and the latest market trends.

▲ Outstanding production capabilities

As one of the market leaders in carbide manufacturing for many decades, we have built up an expertise and a machine park that are unique to the market. No other carbide manufacturer can offer our level of production diversification.

Analytics

Unlimited carbide analysis

We offer different analytical packages to check your product sample. From basic metallurgy to specific customer requests – thanks to our state-of-the-art laboratory with its ultra-modern equipment

and the knowledge of our experts, we will find out everything you want to know. It goes without saying that confidentiality will be paramount – with an NDA on request.



Our service

Choose your individual analytical package

▲ Standard

- Cemented carbide metallurgy
- Brazing or glued joints study
- Welding joints study
- Breakage analysis study
- Wear analysis study
- Corrosion zone study

▲ Additional (for in-depth investigation)

- Chemical analysis
- Galvanic coating analysis
- Hard coating (CVD/PVD) analysis
- SEM investigation (scanning electron microscopy)
- Steel analysis
- Shear test
- Fracture toughness
- Static corrosion test (in liquids)
- Electro-chemical corrosion test (in liquids)

▲ Extended

Will be defined on demand, in consultation with our technical experts and product management team, e.g. bending strength (TRS)



Your benefits

▲ The findings of the studies will give you a deeper understanding of how to improve the material or your process.

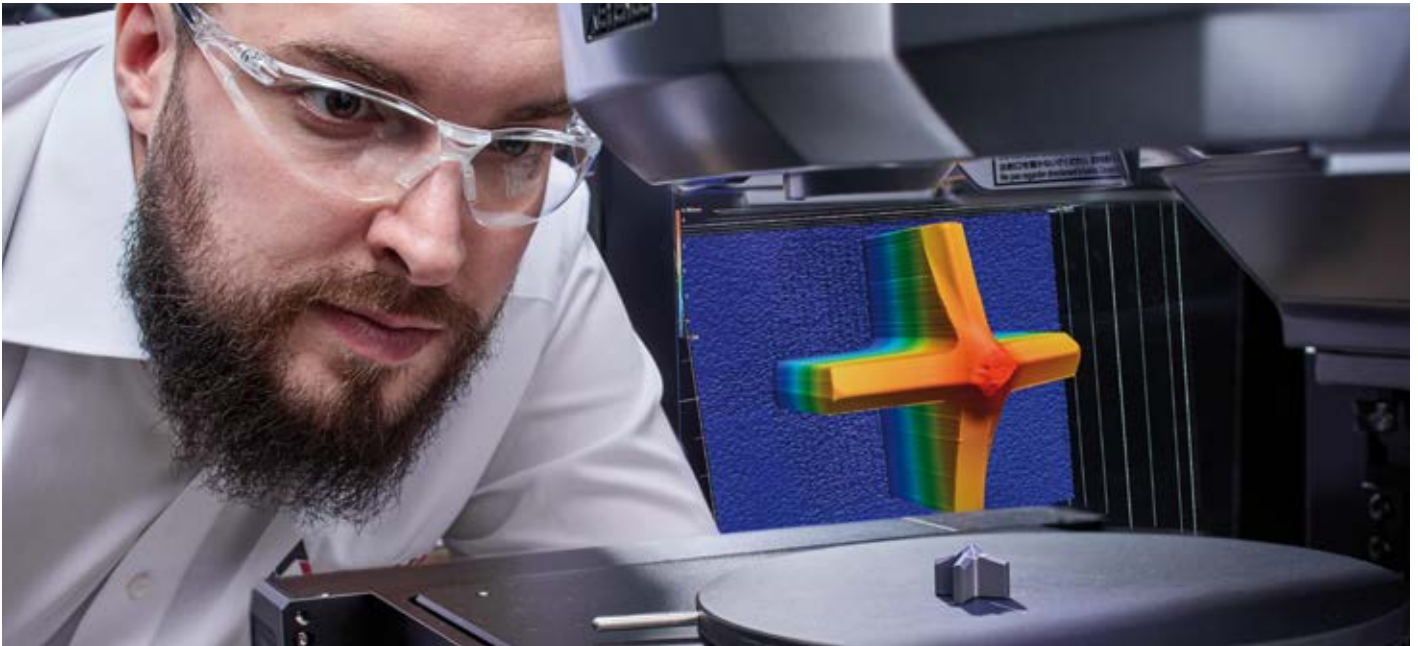
Of course, our service does not come to a stop when we hand over the report – we will be happy to put our many years of experience at your disposal and assist you in further optimisation of the grade, design or process (see 'Grade and design development', page 7).

Rapid prototyping

Turn your idea into reality

If you have a promising idea for a new carbide tool, you can rely on us as your development partner. We will work with you to identify in the shortest time the custom-made carbide solution that meets

your application's specific requirements. With our new 'Rapid Prototyping' service, you can be sent a prototype within just eight working days.



Our service

▲ Remarkable speed

After receiving your STEP file, we produce your samples without any downtime and dispatch them via express delivery.

▲ Maximum variety and flexibility

We can easily create complex geometries and small delicate parts, thanks to our state-of-the-art 5-axis lathes and milling machines which allow us to machine workpieces simultaneously.

▲ Technical support

From your initial idea to the application of your new product, our expertise is available for you at any time. Our technical support ranges from advice on design development and the choice of the correct carbide grade and coating, to helping you with the optimisation of your final application.

▲ Consistently high quality

We manage the entire process chain of carbide production. From raw material production and powder preparation to forming, sintering and finishing, we can make the right adjustments at any time and adapt the material properties to your individual requirements.



Your benefits

▲ **Get your prototypes in record time –**
don't waste time hanging about!

▲ **Benefit from our decades of experience and expertise –**

from advice on design to choice of the correct carbide grade and coating, and extending to assistance for the optimisation of your final application.

▲ **Exactly what you need –**

we have the resources to produce your individual product, even including complex geometries or minute and delicate parts.

▲ **Only the best –**

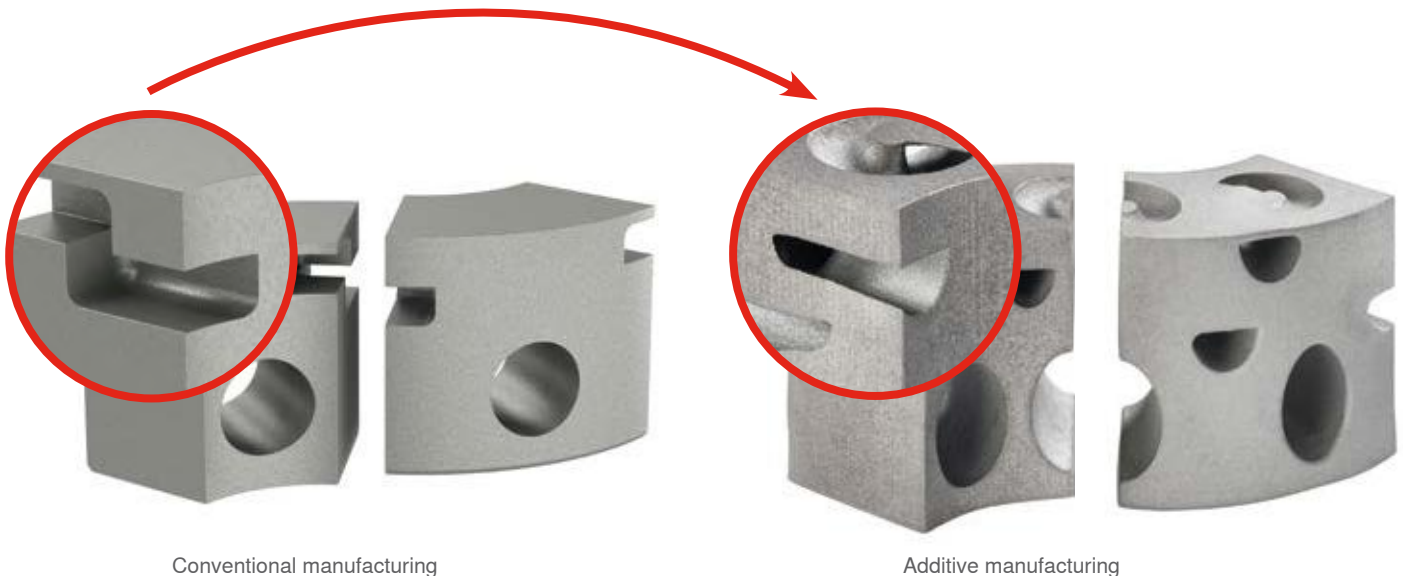
our carbide grades offer the highest quality on the market, so you can rely on the consistent high quality of the tool.

Additive manufacturing

You imagine it – we make it

We have developed additive manufacturing technologies for our tried and tested cemented carbide grades which are ready to use for your product. Additive Manufacturing or 3-D printing is a manufacturing process that adds layers of materials to make products from a 3-D data model. Thus the process is opposite of the conventional

production process where material is removed to create a specific form. This technology allows designers to think in completely new forms and shapes as it pushes the limits when it comes to the production process. If you can imagine it, we can make it.



Our service

▲ Our experts will be happy to assist you in the following areas

- Simulation and modelling
- Design adaptation to additive manufacturing
- Material selection

▲ We will help you choose the right technology for your product.



Your benefits

- ▲ 3-D printing provides new technological possibilities to overcome existing limitations of conventional manufacturing processes.
- ▲ Realisation of individual parts, from batch size 1 upward
- ▲ Shapes can be redesigned and optimised, which is especially interesting for complex shapes or if you need to alter properties such as weight or size.
- ▲ Faster production than traditional powder metallurgical shaping, as time-consuming steps like CNC machining can be eliminated. This is especially advantageous for prototyping so you can do fast tests and improve designs.
- ▲ The manufacturing process is sustainable as there is less waste of material.
- ▲ The risk of error when designing a new product is reduced, which saves a lot of money (it can be very costly if manufacturing equipment needs to be modified).
- ▲ Furthermore, cemented carbide parts that are produced by additive manufacturing technologies can be an economical substitution for high-performance materials. Thanks to the hardness of cemented carbide, your tools and components will have a much longer tool life and your productivity will increase.

Orders and inventory management

The management of orders and inventory is the key to an efficient supply chain. In consultation with you we will analyse your requirements and find the best solution, so you can count on having the right product quantity at the best price, at the time when you need it: from consignment stock to call-off orders or vendor managed inventory – we offer several different approaches to help you optimise your stock management.

Of course we will also draw up customised, automated reports in accordance with your needs.



Consignment stock management

Inventory within reach

Based on a consignment stock agreement, the products are placed in your warehouse, allowing you to consume them directly from stock as needed. You will be billed once you have consumed the

item. Your advantage is that production and shipping lead times are eliminated: you have everything on site exactly when you need it.



Our service

- ▲ Providing consignment stock to support and absorb supply chain fluctuations within the entire supply chain
- ▲ Based on minimum and maximum inventories defined, the replenishment process can be triggered by CERATIZIT. It can be covered either by an individual customer purchase or by a blank customer purchase order.



Your benefits

- ▲ **Flexibility for your manufacturing process** – you can process the products without lag times between ordering and production.
- ▲ **You do not tie up capital in inventory** – you pay for what you consume to meet the needs of your production.

Call-off order management

Maximum flexibility

For so-called 'make-to-order products' (= materials which are not held in stock), CERATIZIT offers the option of topping up your expected demand for a defined timeframe with 'make-to-stock

products'. Sophisticated logistics processes and flexible high-capacity production ensure a fast and reliable delivery of your solution.



Our service

- ▲ We secure the supply of your make-to-order products over multiple delivery dates within the defined time period of 12 months.
- ▲ You 'call off' the goods when you require them.
- ▲ Based on the call-off order, deliveries are generated as needed until the terms of the contract are met.



Your benefits

- ▲ **Flexible**
'Call off' your anticipated consumption in the course of the year, whenever it is needed.
- ▲ **Economical**
No need to hold more stock than necessary – save storage space as the inventory is located in CERATIZIT's warehouse.
- ▲ **Time-saving**
Rapid availability of products ready for shipment

Vendor Managed Inventory (VMI)

The solution for efficient replenishment according to your forecast demand

When you choose vendor managed inventory, we take care of everything for you. Based on your forecast, we take full responsibility for maintaining an agreed stock by constantly monitoring the

alignment of supply and demand. VMI aims to ensure an automated and continuous flow of goods, thus reducing superfluous safety stock in your warehouse.



Our service

- ▲ We define a minimum and maximum safety stock level at both our and your site, based on your weekly or monthly forecast.
- ▲ Depending on your use of actual stock on site and the forecast demand, the quantity to be delivered by CERATIZIT will be automatically triggered on a weekly basis.
- ▲ We will organise a quarterly review of the materials (SKUs) on VMI, considering the customer's forecast accuracy, production lead time, safety stock evolution (age) and target safety stock levels.



Your benefits

▲ Minimising supply risks

Vendor managed inventory makes it less likely that you will run out of stock. The more accurate your forecast, the better we can optimise replenishment and ensure the proper levels of inventory to meet your demand.

▲ Reducing costs

You don't need to stock safety inventory at your site anymore, thanks to the adjustment of inventory levels.

▲ Simplifying administration

Benefit from fast processing and reduced purchasing time thanks to automated and reliable data exchange. EDI functionality can be of use in the VMI replenishment process (see page 25).

Demand planning

Optimising your supply chain planning

Demand planning is very important to ensure that each operation is on time, efficient and cost-effective. Effective demand planning requires a variety of information that needs to be interpreted the right way. Our centre of excellence for supply chain solutions in

Kempton, Germany, supports you in the development of supply chain solutions. You can count on our expertise to prepare a detailed analysis and work out the most suitable solution for you, adapted to your needs.



Our service

- ▲ We analyse demand, trends and seasonality and propose a range of solutions such as setting up the proper forecasting model.
- ▲ Of course we can also review planning and forecasts with you on a regular basis if you so wish.



Your benefits

- ▲ **Efficiency**
Overcome uncertainty and fluctuation in both demand and manufacturing

Reporting

Everything you need to know

A prerequisite for efficient supply chain management and successful planning is the availability of correct and up-to-the-minute data.

Thanks to our automated systems that store all interactions, you always receive the data you need as a basis for your analysis.



Our service

- ▲ We develop automated reports for you, such as open orders, open invoices, shipments in transit or new availability dates.
- ▲ You can get these reports either on a weekly or on a daily basis via e-mail, or you can simply log into the E-Techstore platform which is accessible 24/7.



Your benefits

- ▲ **Optimise your planning**
Never miss important information or deadlines so you can plan your production or sales as efficiently as possible.
- ▲ **Always up to date**
All documents are stored in our E-Techstore online shop where you can access all information 24/7, so you have all the desired data to hand.

Support

There are few carbide manufacturers with experience like ours. For almost 100 years, we have been managing the entire carbide production process, from powder production to the finished assembled product. This gives us a unique knowledge about the properties and behaviour of carbide during its production, machining and application.

As your business partner, we aim to share this knowledge with you so you can work in the most profitable way possible. Our technical experts will be happy to visit you and give an in-house seminar, or you can attend one of the regular seminars that we organise with other key players in the industry. We also offer some of our training courses as e-learning modules which you and your employees can access directly from your computer, whenever and wherever you are.

If you have a specific need, ask our consulting staff to visit your business premises. Together we will look into ways of improving your processes. Or you can come to one of our plants to see our state-of-the art production lines – this can give you valuable insights and trigger new product design ideas.



Seminars and training courses

Always up to date with the latest market trends

The expansion and transfer of expertise is a key success factor for your business. That is why we offer training courses which help you understand more about tungsten carbide, so you can recognise new opportunities and ultimately improve the profitability of your production. From basic knowledge about the composition and unique properties of carbide, as factors that should be taken

into account for all production and application processes, down to specific, highly technical niche topics – just contact us to discuss how we can support you.

We offer our training courses at your premises, or alternatively at one of our sales centres or production sites. Training can also be offered digitally via webinar or an interactive e-learning module.



Our service

▲ Exactly what you need

Our technical experts will be happy to conduct seminars and training courses for you either at one of our plants, where you can experience the production process at first hand, or on your premises. Choose from one of our seminars with pre-defined topics or ask us to tailor a technical training course to meet your individual requirements. Another option is to register for one of our e-learning courses: you attend the course at your own location and save travel and other expenses.

▲ From experts for experts

The contents of the seminars and training courses are designed by our experienced engineers and researchers, who then conduct the courses themselves. Of course they are also available for questions and discussions outside the set training times. For broader topics, we strategically align with key players in the industry that are part of our specialist network to ensure that we offer the best and most informative training programmes to our partners and customers.



Your benefits

▲ Benefit from our expertise in metallurgy, engineering and the use of tungsten carbide for your application.

Our experts can give you crucial information that helps you optimise your processes and opens new possibilities.

▲ Our seminars are the perfect place to build up a holistic network

by meeting and exchanging ideas with experts from different areas and steps in the value chain. With all our skills coming together, we will better understand how it all inter-relates and so find the best solutions for every process and challenge.

Consulting

Cross-process consulting for your success

Sometimes small changes can have a big impact on your productivity. That is why we review and analyse your applications and processes systematically to find ways of improving your efficiency. Optimising your machining strategy, improving tool life by modifying the choice of grade or geometry or using a ready-prepared component for further processing - there are many ways to increase

your productivity. Let's find out together how we can improve your efficiency. If you have identified an actual production problem that you need help with, of course you can count on our experts to solve it thanks to their deep understanding of applications and processes.



Our service

▲ Systematic approach

After you have told us about your objectives, our experts will analyse your processes and the active carbide parts to determine the primary cause of wear. We check your whole working process - how the tool is used and integrated - and then outline the optimal properties of the carbide part with a view to optimisation of the process and the working parameters. Joint analysis and reassessment of performance after the changes have been made ensures the lasting success of our collaboration.

▲ Unique set of knowledge

As a pioneer in powder metallurgy, we have decades of experience in manufacturing and machining carbide and know just how materials behave in practice. This experience, combined with our aspiration to be an industrial innovator, makes us your perfect partner. Depending on your project, we will find the right contact person for you. This may be a colleague from our sales and product management department who is already familiar with your business challenges. Or if you are interested in a specific process like grinding or welding, we will put you in touch with one of our experienced specialists.



Your benefits

▲ Flexible working methods

Depending on your requirements, we are happy to do on-site consulting to get the complete picture of your processes, or we can invite you to whichever one of our production sites is most relevant for your needs. Here you can see at first hand how we manufacture, machine and use carbide in practice.

▲ Expert advice

We simulate your processes and continue testing from a distance to find out what can be optimised. If you just want to get advice from our experts on specific topics, we are happy to share our expertise with you in a technical discussion.

Logistics

Our extensive services do not stop after the production of the goods. We also offer you high-quality standardised or individual solutions for packaging and dispatch, so that you receive the goods in the way that is best suited for you.

Our distribution hub in Kempten, Germany, is currently undergoing transformation into a fully automated logistics hub with an even more efficient pick & pack performance. More than 100 employees work here to ensure that logistic processes always run smoothly for our customers.



Distribution and freight services

High delivery capacity thanks to state-of-the-art logistics

Efficient freight shipping is the key to getting goods to their destination on time, safely and cost-effectively. Our modern high-tech

shuttle warehouse with high-performance order picking has approx. 200,000 storage spaces for about 90,000 different items.



Our service

- ▲ Warehousing and shipping
- ▲ Direct deliveries to end-customers worldwide
- ▲ Export and import processing
- ▲ Guaranteed air cargo security
- ▲ Returns processing
- ▲ Quality management



Your benefits

▲ Reliable delivery times

With over 10,000 picks and more than 4,500 parcels per day, we work in a highly efficient and automated way, leaving no room for mistakes or downtime. We have access to an extensive distribution network with top carriers, and so are able to organise shipping to every destination around the globe.

▲ Cost-efficient shipping

We take pains to find the most interesting freight shipping rates for you, taking the means of transport, origin and destination into account, as well as the size and weight of the package and any special services you might need.

Packaging and labelling

Your products – your package design

To ensure that your solution meets the needs of your business and your customers, you can choose from a wide range of packaging solutions. Both the packaging itself and the labels can be adapted

in various ways. Thus even the packaging of the products you receive will be wholly in keeping with your requirements.



Our service

- ▲ We pack and label your products according to your packaging and labelling specifications.
- ▲ We only work with experts in the packaging industry, so as to make sure that the products delivered conform to your packaging and labelling standards and market practice.



Your benefits

- ▲ **No time to lose**
You get the products exactly packed and labelled as you need them, with no extra work for repacking.
- ▲ **Premium quality**
With CERATIZIT as your partner you can count on premium quality – even in such matters as the packaging of your products.

IT tools

Our e-commerce solutions allow you to benefit from additional digital possibilities to speed up ordering processes, increase your operational efficiency and save time thanks to shortened communication paths.

Our E-Techstore online shop has more than 25,000 stock products for direct ordering, and you can access your complete online and offline order history with CERATIZIT.

You can also configure your individual product online with just a few clicks, or use EDI to ensure automated data transfer between your system and ours.



EDI connection

Streamlining your processes

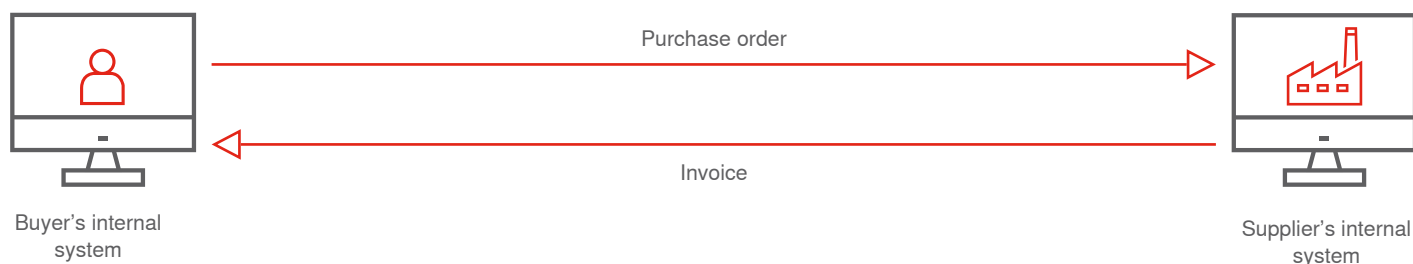
Looking for an easy and efficient way to exchange data between the computer systems? We have got the solution. A direct standardised communication of business documents such as purchase orders or

invoices via electronic data interchange (EDI). EDI replaces manual communications like e-mails or postal mails, the documents go directly from the sender's to the receiver's system.

Traditional manual process



Automated EDI process



Our service

▲ EDI setup

We will consult you on whether an EDI connection is the most suitable basis for our collaboration, select the appropriate operating model and assist you with the setup.

▲ Support

After the data mapping and testing are complete and the EDI has been set up, the whole process should work without human interaction. In case of any technical trouble or need for modification from your side, our IT team is of course always there to assist you.



Your benefits

▲ Reliable delivery times

With over 10,000 picks and more handling activities as the electronic data interchange frees up human resources for higher-value tasks.

▲ Speed up processes

Automated transfers speed up logistics timelines with fast transmission times and the avoidance of duplicated work thanks to accurate information. In addition, all information is available quickly and accurately for your controlling and analysis.

▲ Reduce errors

No more manual data entry and processing means eliminating human errors, which also leads to fewer reworked documents and thus faster processing.

E-Techstore

Shop conveniently online around the clock

Our E-Techstore is your 24/7 online access to CERATIZIT products: an intuitive and user-friendly design, with clearly struc-

tured categories and filter functions, makes it easy to search and find the products you are looking for.

Our service

- ▲ Shop 24/7 – wherever and whenever you want
- ▲ Real-time worldwide availability and stock information for over 25,000 products
- ▲ Track and trace your orders and shipments
- ▲ Immediate order confirmation
- ▲ Complete product information: product and technical details
- ▲ Full document history: invoices, history of both online and offline orders etc.
- ▲ Order a standard item or configure your tailor-made solution



E-Techstore.com



Your benefits

▲ Availability

Shop our large assortment of over 25,000 products online. You will get instant information about availability and real-time stock updates from our warehouses all over the world.

▲ Configurator

If you are looking for something specific and can't find it in the standard range, our online product configurator makes it easy to design a tool to meet your needs (see page 27).

▲ Information

Get detailed information about our products, including CAD data, technical drawings and images, with filters for an easy product search.

▲ Support

You won't be left on your own. Our customer service and sales teams are always here to answer your questions before, during and after your purchase. All details of your personal contact at CERATIZIT are just one click away.

▲ Documentation

Find all your on- and offline transactions in one place (quotations, orders, invoices etc.) with tracking and tracing of your shipment history.

▲ User management

Benefit from a multi-user system where you can decide which level of authorisation a user should have, depending on the role within your company.

Online product configurator

Just a few clicks to create your very own individual product

Configuration, ordering, production and delivery are consistently integrated in a highly automated process.

Design your individual carbide blanks and tools online with just a few clicks in our E-Techstore to speed up your supply chain process!

Now even easier, faster and more reliable. Our configurator is available for many different product groups and we are constantly extending our offering.



Our service

▲ Your order in a few steps

- First you enter the finished dimensions.
- You will see a 2D drawing visualisation with the dimensions you have entered. In this way you can check your entries speedily and securely.
- You then receive an immediate offer on the exact conditions you have specified.

▲ Digital production for the future

- Your order data are directly transmitted to our ERP system which produces all the production parameters needed.
- Automatic production starts immediately after your order has been placed.

▲ We are constantly extending our configurator offering. Currently it is possible to order

- Blanks for hobs
- Circular tooling blanks
- Rotary cutters for the sanitary industry
- Blanks for cold forming
- Solutions for the fastening industry



Your benefits

▲ Order individual blanks and tools easily – 24/7

With just a few clicks you will receive an offer of your customised blanks and tools. Your offers are saved along with the design data – you can place the order immediately or come back later. Wherever and whenever you want.

▲ Configure your dimensions quickly and safely

Simply enter the finished dimensions and rapidly compare the visualised part with the data you have entered. You immediately get an automatically generated offer, including a delivery date.

▲ Excellent support

When needed, our experts can intervene to support you personally. We have an online tutorial available to show you all the possibilities and features of the configurator.

Special operations

Our services do not end with logistics, metallurgical analysis or know-how transfer, we also offer operational services for your used carbide parts. Often even a worn-out or broken part can regain almost the same performance as a new one when machined correctly.

Whether you bought the original component from us or a third party, you can count on us to assist you in matters like regrinding or repairing and – at the end of tool life – we even repurchase the used parts for recycling.



Assembly

A technical solution for all you need

Thanks to our deep expertise and long experience in the manufacturing and machining of carbide, we offer an assembly solution for fabricated carbide parts and components that will meet your needs exactly. We have a long history of working with customers

in a relationship based on trust to assemble their individual product completely in-house, whatever the application or industry. Our engineering team is at your disposal for all your requests, however complex they may be.



Our service

▲ Everything you need

We carry out the whole project for you, from a simple price request, to the development of alternative solutions up to industrial realisation and delivery of the final solution. Thanks to our great variety of manufacturing processes, such as steel/carbide assemblies, steel/carbide brazing, steel/carbide shrinking and steel/carbide laser welding, we make sure that you get exactly what you need.

▲ Always there for you

We are at your disposal for any questions and technical support throughout the whole project. Please note – the more precise your requests are (application, forecast volume etc.), the faster and more accurately we will be able to respond.



Your benefits

When working with CERATIZIT, you get the best of everything.

- ▲ A highly dedicated and experienced, interdisciplinary team to take care of you and your requests, making sure that you will get the best possible solution to maximise your profitability
- ▲ Excellent quality thanks to our unique production capabilities, experience and expertise in the manufacturing, machining and use of carbide

Regrinding

Performance almost as good as a brand new tool

Among the various services we offer are reprofiling and regrinding. These processes allow you to restore surfaces worn by time or intensive use of your product or tool so you can reuse them instead of exchanging them, reducing the total cost of ownership.



Our service

▲ Giving a second life to your worn tools

After a study of your requirements and depending on the material remaining on the product to be re-worked, we will give you a precise and competitive offer for all available options so that you can choose the most profitable solution for you. You can count on us to give you a fair and transparent evaluation. If it is not possible to meet your specifications by reworking your product, we will offer you a new product. Whether reground or new, you will get your tool within the requested tolerance.



Your benefits

▲ Save costs

When working with CERATIZIT for regrinding or reprofiling, you save costs twice: not only is regrinding less expensive than buying a new product, but outsourcing this operation to us eliminates the cost of grinding machines and qualified operators at your site. Furthermore, we work more cost-effectively than your in-house regrinding department as we grind large quantities of carbide parts and tools for our customers every day.

▲ Get exactly what you ask for

Thanks to our longstanding experience and deep understanding of carbide production and machining, we ensure that your tools and parts are reground within the requested tolerance. With our large state-of-the-art machine park, we are able to regrind all types of carbide parts, including even very large and very small diameters. For you this means close to 100% of the original tool life and the machining performance of a new tool.

Recycling of cemented carbide

Ecological, sustainable and economical

For us, recycling means the responsible handling of resources. We pursue a deliberate policy of conserving limited primary resources through metal recycling, by notably increasing the ratio of reused materials.

By recycling secondary materials, CERATIZIT also limits the consequences of intensive mining, such as air, water and soil pollution, and helps check the excessive use of energy.



Our service

▲ It couldn't be simpler - we organise every step of the process for you

We repurchase your cemented carbide, based on the current market price and supply quantity-specific containers and transport solutions free of charge. Our optimised recycling processes guarantee an increased yield rate of the secondary raw materials.

- ▲ There are two different methods for reducing the carbide end-product to the basic material for recycling. First the **thermal zinc process**, resulting in a powder which contains over 99% of the tungsten carbide in its original form, along with metallic cobalt and other additives such as grain growth inhibitors. Secondly, there is a **chemical process** where cobalt results as a separate by-product and very little energy is used. For both processes we work closely with our partner company Global Tungsten & Powders (GTP) in the USA.



Your benefits

▲ Individual solutions

Together, we optimise your cycle from sales to scrap return, from production to repurchasing, in a long-term partnership.

▲ Certified quality

We have developed processing methods, certified to ISO 9001 and ISO 14001 standard, to convert carbide products after use to recyclable powder. This means that you can always rely on the outstanding quality of our carbide grades.

▲ Social and ecological responsibility

Help to conserve the earth's valuable and limited primary resources by acting mindfully! Recycling limits the consequences of intensive mining, such as air, water and soil pollution, as well as the excessive use of energy. With a balance of up to 75% energy savings and 40% reduction of the total CO₂ output, this proves the high efficiency of recycling in terms of energy and environment management.

Repairs / refurbishing / reconditioning

Don't replace it – fix it!

More and more customers ask us to recondition their tools when wear makes them unusable or when the carbide part breaks.

If regrinding does not work, we will repair, refurbish or recondition your carbide part!



Our service

▲ Finding the best solution

When you send us your product and let us know your requirements, we closely analyse the carbide part to determine feasible solutions. We repair or replace it if it can be disassembled, or we evaluate various assembly solutions (see page 29). If it is not possible to meet your specifications by reconditioning, we will offer you a new product.

▲ Conserving resources

We offer to buy back the broken carbide part against a credit note on a future order so we can recycle it (see page 31). In this way you are not only cutting the cost of your next order, you are also contributing to the environmentally responsible handling of primary resources.



Your benefits

▲ Expert advice

Our engineering team will provide you with a complete study, a price quotation and a choice of options, so that you can decide on the most profitable solution for you.

▲ Excellent quality

Thanks to our unique production capabilities, experience and expertise in the manufacturing, machining and use of carbide, you can count on us to find the best solution to rework your tool with an excellent result, almost as good as new!

Marketing

The key to successful marketing is a strong brand. This means you are more likely to be selected than the competition, creating positive associations in the minds of the target group, giving your product an emotional charge, motivating the customer to purchase and creating user loyalty.

As one of the top three brands of carbide manufacturers, CERATIZIT will assist you in strengthening the awareness and perception of your brand. Use our ingredient branding and marketing materials, like posters or brochures, to benefit from our strong brand reputation. If desired, we also offer a creative service to help you produce your own marketing materials, such as advertisements or brochures.



Dedicated marketing services

Strong branding as a key point of your market differentiation

CERATIZIT is among the market leaders for all kinds of hard material solutions. We continuously monitor our brand equity and are proud to be known for the outstanding premium quality of our products and services.

Use our brand name to benefit from our reputation. You can add credibility to your final product by associating it with premium components and semi-finished tools from CERATIZIT.



Our service

- ▲ We give you guidelines on how best to represent the CERATIZIT brand.
- ▲ We consistently develop the brand by closely monitoring the latest market trends and potential customer needs.
- ▲ We focus on continuously enhancing brand awareness and sharpening the brand perception, in the following ways for instance:
 - Adopting a consistent and modern design
 - Maintaining state-of-the-art online visibility, as with our website ceratizit.com or our Social Media Channels, including SEO and SEA
 - Creating digital and printed brochures to tell potential customers about our capabilities, USPs and services
 - Presenting our products and services at leading trade shows all over the world
 - Promoting the overall image of CERATIZIT by all PR means available



Your benefits

- ▲ Enhance the value of your products and solutions by identifying them with CERATIZIT's premium brand reputation – this will have a positive influence on your customer's decision to purchase.
- ▲ Draw on an abundance of marketing and information materials (like posters, roll-ups or brochures) that define the advantages of CERATIZIT.

We can also help you create your own marketing materials for CERATIZIT-related themes.

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
- ▲ Tool & die industry
- ▲ Water-jet cutting
- ▲ Hob milling
- ▲ Fastening industry
- ▲ Drawing tools & drawing nibs
- ▲ Blanks for rotary cutters

- ▲ Injection technology
- ▲ Health industry
- ▲ Plastics industry
- ▲ Hot rolls made of cemented carbide and ceramic
- ▲ Silicon nitride



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