Schunk Carbon Technology
Imagine. With Carbon.

Schunk Carbon Technology focuses on the development, manufacturing and application of both carbon and ceramic solutions. It combines an innovative spirit and technological expertise with an exceptional customer service to provide a range of products and solutions unique in the market. With Schunk Carbon Technology, you have a partner who can offer all the technological possibilities of an international company and implement custom-tailored ideas to your needs, both for high-volume industrial markets as well as for highly specialized niche applications. After all, this is our commitment: Ahead in carbon technology. Closer to your business.

A Schunk Group division.
Enabling, idea-driven and cooperative - if you hope to use technology to develop better products and capture new markets, we can help. The Schunk Group has been supporting customers with innovative technologies since 1913. As an idea-driven technology company, innovation is fundamental to our culture. We forge long-lasting, cooperative working relationships with our clients.

You’ll find our custom-tailored high-tech products and systems in such markets as carbon technology and ceramics, environmental simulation and air conditioning, sintered metals and ultrasonic welding. The Schunk Group is active in a large number of key industries, from automotive, rail, aviation and marine technologies to solar and wind energy, medical and electrical technology as well as the semiconductor industry. Our more than 8,100 employees in 29 countries are ready to serve your needs.

Advanced Solutions
Accelerating Your Way to Innovation.

To enable cutting-edge developments with our customers we established “Advanced Solutions” – a business unit that covers all the technological know-how of the Schunk company and offers solutions with an added value.

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Advanced Solutions can be considered as Schunk’s business incubator for new approaches, materials and technologies encompassing carbon, ceramics and quartz. We grow products from ideas thus paving the way for industrial trends and providing the technological solutions for your applications. Advanced Solutions opens new markets and enables growth opportunities.

“Follow your vision because what is impossible today may be the norm tomorrow.”
— J.A. Barker

Keeping this in mind, Advanced Solutions enables you to discover the revolutionary and develop the customized products. Advanced Solutions can be considered as Schunk’s business incubator for new approaches, materials and technologies encompassing carbon, ceramics and quartz. We grow products from ideas thus paving the way for industrial trends and providing the technological solutions for your applications. Advanced Solutions opens new markets and enables growth opportunities. Through technological cooperation with our partners, we ensure the success of our customers.
Schunk PAVEs – Process Added Value Engineering of Innovations.

Process Added Value Engineering (PAVE) is Schunk’s unique approach to creating and introducing state-of-the-art industrial solutions. It is an evolution of our traditional solutions approach and the realization of serial production.

We call it PAVE – Process Added Value Engineering. By combining and advancing our production techniques, we meet your specific requirements. You will profit from our innovative and non-conventional approach to develop new products that precisely meet our customers’ requirements. You will profit from our innovative and non-conventional approach to develop new products that precisely meet our customers’ requirements.

Process Added Value Engineering is based on our unique single-source approach for creating customized solutions from carbon, ceramics and quartz. Schunk has over a century’s experience in developing high-quality products and processes through our global production sound foundation based on years of expertise but keep innovating.

We manufacture customized products in specified shapes and sizes in large dimensions. All this know-how contributes to Schunk’s indestructible company and the realizable form complexities. Schunk will surely impress you with the large dimensions which ensures customer-oriented practices and an efficient manufacturing technique for graphite, quartz, ceramics, carbon or add additional functions to put you ahead of the competition.

For each application, the material will be selectively processed to maintain its desired electrical, chemical and thermal properties. Schunk Carbon Technology masters all the necessary techniques, which ensures customer-oriented practices and an efficient manufacturing technique for graphite, quartz, ceramics, carbon or add additional functions to put you ahead of the competition.

The properties and specifications of each finished product are defined by us. Our assembly and engineering expertise is also focused on developing new solutions for an efficient market introduction.

Make PAVE Your Winning Composition.

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New Thinking Leads to Innovative Solutions.

The broad diversity of the activities of Advanced Solutions can be illustrated by the four examples below. These products represent perfect innovations originating from unique ideas important for future trends.

Latent Heat Carbon

The newly developed composite comprises an expanded graphite that has been infiltrated with a phase-change material utilizing the high thermal conductivity of expanded graphite with significantly improved heat accumulation properties. The manufacturing method is new too - the foaming nature of the graphite enables flexible geometries, optimal thermal contact and one-step forming.

This product was developed upon the request of a customer to prevent the overheating of fuel after switching off an engine. Latent Heat Carbon can also be used to cool electronic components in e-mobility applications.

Carbon Fiber Reinforced Carbon Springs

This example demonstrates our expertise in developing even the most high-end solutions. The springs were developed for the aerospace industry and were part of a research device on the D-2 Spacelab mission to study crystal growth under microgravity conditions.

The carbon fiber-reinforced carbon springs were produced using a cost-efficient wet winding process. They are, thus, considerably more affordable than sapphire springs and beat any metal alternative in performance. These springs have a low weight, are electrically conductive, corrosion and creep resistant, and withstand temperatures up to 1800°C.

Carbon Fiber Grounding

Schunk shaft grounding systems with carbon fibers protect bearings and transmission components from damage caused by stray electric currents. Their unique structure consisting of woven carbon fibers ensures ideal operation in the presence of small, but dangerous high-frequency shaft currents. It also exhibits greater wear resistance. Highly conductive and thoroughly coated fibers reliably transmit currents to defined earthing points and prevent the formation of micro-arcs, ensuring longer lifetime and better performance of the system.

If necessary, shaft grounding can also be adapted to mobile drive systems and stationary industrial systems. Thanks to their compact size, our carbon grounding can also be easily retrofitted. This means that the product quickly pays off, reducing repair and maintenance costs for our customers.

Carbon Power Brushes

Our special carbon brushes for DFIG wind turbines are an excellent example of a successful cooperation with our customers. We have customized materials suiting the harshest conditions all over the globe. Our carbon brushes guarantee a reliable electric current transmission and long operational lifetimes, in dry deserts or in offshore sea water climate.

You can always count on our expertise in terms of outstanding wear performance and simultaneous protection of the slip ring, high thermal and electrical load capacity making our carbon brushes the best on the market.

Schunk Carbon Technology enables efficient operation of wind plants contributing to the growth of the renewable energy sector for a greener world.