

SCHAEFFLER



Schaeffler Global Technology Network

Together we move the world





Working together to turn **challenges** into opportunities

Globalization opens up limitless opportunities for companies – while at the same time confronting them with enormous challenges. Rising competition and ever-increasing pressure to cut costs have made it absolutely essential that companies rigorously exhaust all opportunities for optimization. To that end, machinery manufacturers and operators rely on machines and systems that deliver the highest levels of productivity and efficiency.

Meanwhile, the core issues facing companies are the same all over the world:

- Where can we increase efficiency?
- How can we react to dynamic markets more quickly and with greater flexibility?
- How can we increase machine and system availability and lower Total Cost of Ownership?
- How can we sharpen our focus on our core competencies?
- How can we secure and further expand our competitive position over the long term?

Schaeffler provides intelligent answers to these questions. As one of the industry's leading suppliers of rolling bearing solutions, we view our customers as partners with whom we work on a global level to help master the challenges of the future. To that end, we have combined our technical expertise in a vast range of disciplines with our proven know-how in over 60 industry sectors to create the Schaeffler Global Technology Network.



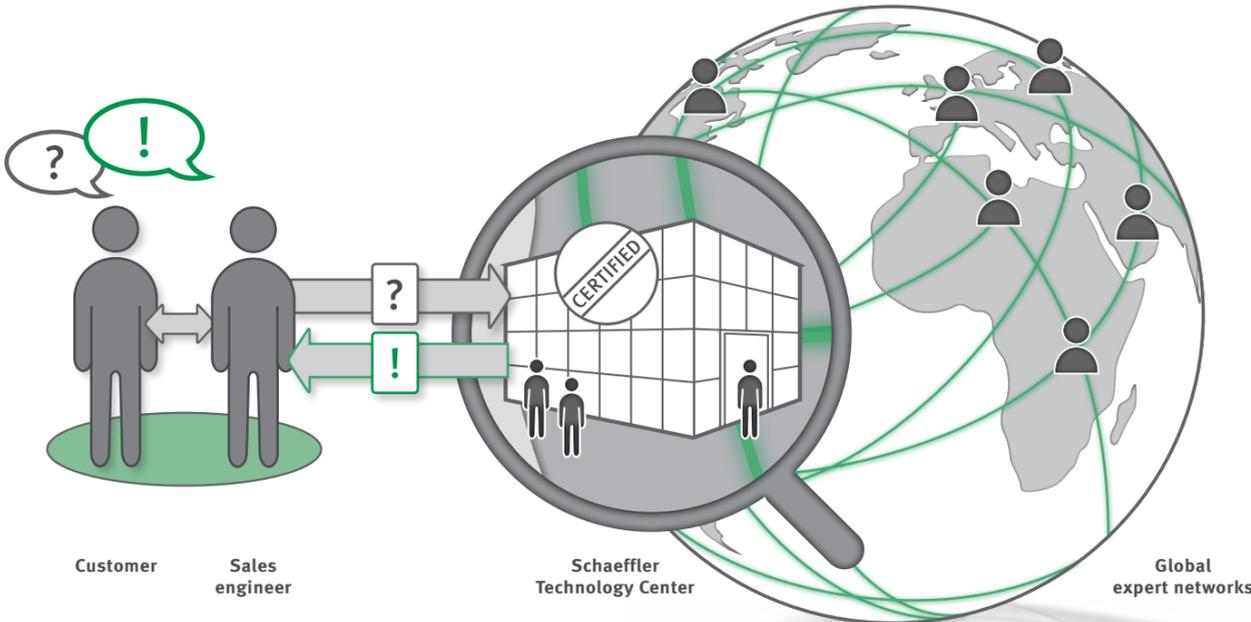


Global expertise – local knowledge – optimum customer performance

With the Global Technology Network, Schaeffler brings together its local knowledge, developed over decades within each region, with the full know-how and innovative power of Schaeffler experts from all over the world. And no matter where on earth you may need us, your local Schaeffler representative is always your link to the Global Technology Network.

Schaeffler Technology Centers serve as regional centers of excellence within the Global Technology Network. They ensure that, throughout the world, our portfolio of engineering and service capabilities is always close to our customers. In addition, our experts are constantly exchanging knowledge and information – across both technical disciplines as well as regional borders. This allows our customers to enjoy unmatched levels of service in every corner of the globe, along with innovative, customized solutions of the highest quality that can only come from the collective expertise of Schaeffler.

Schaeffler Global Technology Network: A powerful network dedicated to your success



This is how we provide superlative solutions to all your technical needs:

You contact your sales engineer, who functions as your local Schaeffler representative, with your inquiry. If necessary, she / he can call upon an engineer from the Schaeffler Technology Center for assistance. Together, they can perform a wide range of tasks, such as carrying out complex calculations or providing mounting services. If your project requires it, our global network of experts gets involved: now your task is being worked on by Schaeffler experts around the world. The right solution, developed through the collaborative efforts of our vast knowledge network, is then presented to you by your local sales engineer.



At a glance

The Schaeffler Global Technology Network consists of more than

- 1 250 local engineers at more than 130 sales offices and over 20 Schaeffler Technology Centers
- 1 000 industry and product experts
- 6 000 R&D engineers

A global network of company knowledge: Local knowledge and global expertise team up to deliver customized rolling bearing solutions

Local knowledge – Schaeffler Technology Centers

In the region, for the region:
The Schaeffler Technology Centers ensure that our knowledge in all of the areas shown in the figure on the right is available all over the world. This allows us to provide superlative solutions to your technical questions:

- Selecting the right products for your specific application – if appropriate, with the help of calculation software such as BEARINX®
- Determining the mounting tolerances
- Calculating the rating life or lubrication intervals for your products
- Mounting, lubricating and condition monitoring of your products
- Training for your employees

Within the Global Technology Network, the Schaeffler Technology Centers are constantly in contact with the various expert networks. When highly specialized expertise is needed, these global links supplement the locally available technical knowledge.



Global expertise – our expert networks

In our expert networks, all of the specialists from Schaeffler locations around the world work closely together according to their respective industry sectors. The Schaeffler engineers in our expert networks are distinguished by their profound knowledge in their particular specialty, such as rolling bearings, application engineering, calculation, service or customers' manufacturing processes. They systematically share their expertise, experience and ideas, and work together across regional borders on strategic issues and customer projects. This means that if a complex solution is required for a grinding mill, for example, the Schaeffler Global Technology Network is able to call upon the expert who is most suited to the project – quickly and from anywhere in the world. This ensures fast and highly qualified support.

Quality that has been certified sets a global standard and creates worldwide trust

The "Schaeffler Technology Center" certification serves as both tangible proof as well as a guarantee of the global, uniformly high standard with which we approach our personal partnership with our customers. To that end, we have defined a specific range of best-in-class expertise in rolling bearings and related areas as a benchmark for the Schaeffler Technology Centers – proof that Schaeffler

is living up to its obligations as a premium supplier by providing the best possible support to customers with the same high quality standards throughout the world. Regular training courses, workshops and audits ensure that this standard is permanently upheld. Whether in Europe, Asia, Africa, North or South America – our customers always benefit from over 100 years of rolling bearing experience.

Our No. 1 priority: Optimum customer performance

Thanks to the collaborative efforts between the experts and the local engineers in the Global Technology Network, you receive innovative premium solutions that are tailored to your specific needs – and always state of the art. Working with an experienced partner also allows you to focus your undivided attention on your core business.

In addition, our global network allows for extremely short response times, coupled with the added benefit of Schaeffler sales engineers who are trained to proactively develop suggestions for improvements. In this way, Schaeffler provides comprehensive support to machine manufacturers and operators. We are firmly committed to your company's success on all levels – technical as well as commercial. You will be able to achieve lasting reductions in the overall costs of your machines and systems and increase your competitiveness as a result of our efficient solutions.



At a glance

Benefits of the Global Technology Network

- Access to our complete range of products and services with the added benefit of our comprehensive, globally networked Schaeffler expertise
- One-stop shopping
- Innovative solutions for machines and systems that focus on Total Cost of Ownership
- Application-specific service packages tailored to the customer's individual requirements
- Increased reliability for machines and systems, reduced downtime and optimized maintenance costs
- Protection and enhancement of your competitive advantage

Selected Global Technology Solutions: Our customers' success stories: the best reference of all



FAG split spherical roller bearings ensure less downtime & more savings

A chemical plant in Australia suffered an exhaust-gas fan failure in the processing facility, forcing the plant operator to quickly replace the rolling bearing due to the toxic, unstable gases generated by the chemical production process. Unfortunately, accessing the standard spherical roller bearing with which the fan was originally fitted was extremely difficult. Moreover, the resulting mounting process typically takes about 14 hours. To minimize downtime and the resulting costs, Schaeffler recommended using a split spherical roller bearing.

- Close cooperation between Schaeffler Australia, Schaeffler's mounting experts and Schaeffler Application Engineering in Germany yielded a detailed plan of the entire mounting process.
- Working on site, a highly trained Schaeffler mounting technician provided constant customer support during the modification procedure.

- The new, simplified installation process – which no longer required the time-consuming removal of adjacent parts or the use of bulky lifting equipment – shortened the mounting time from 14 to just 3 hours.

Customer benefits:

By replacing the standard bearings with split spherical roller bearings, downtime and fitting costs were significantly reduced. In this example, the customer saved € 200 000. Split spherical roller bearings also deliver long-term savings, as future bearing replacements can now be carried out much more quickly. Simplified machinery designs and reduced labor costs can also have a positive impact on new facilities construction – to the benefit of machine manufacturers as well as their customers.



Reduced maintenance requirements, courtesy of an ingenious bearing design

A wind turbine manufacturer in Korea needed a custom rolling bearing for the main rotor bearing in a multi-megawatt turbine. This desired bearing had to be designed to the customer's specifications and be easy to maintain. Particular attention also had to be paid to the precise and clearance-free guidance of the drive train. The customer contacted Schaeffler Korea because this new wind turbine design required a very special main bearing.

- The global collaboration between the Schaeffler engineers on site and the application and product specialists around the world enabled Schaeffler to develop a large-size bearing of the highest quality.
- Special Schaeffler calculation software was employed to optimize the design of the bearing and surrounding area.
- Tests performed on Schaeffler's proprietary ASTRAIOS large-size bearing test rig in Germany allowed the bearing's operating conditions to be realistically simulated.
- In addition, a custom condition monitoring solution was developed for this rolling bearing.

Customer benefits:

Thanks to our extensive global network, the customer in Korea was able to benefit from the know-how of Schaeffler experts all over the world: a premium-quality, large-size bearing designed to his individual specifications. The scope of services supplied by Schaeffler was capped off by performance tests carried out on the ASTRAIOS large-size bearing test rig, along with a customized, comprehensive condition monitoring solution.



Reduced risk of failure thanks to professionally mounted rolling bearings

When a major mining company in Peru purchased a second-hand tube mill, four new large-size bearings (with very complex mounting requirements) were included in the equipment it received. Incorrect installation of these bearings or damage to adjacent components would have meant unplanned and expensive downtime once the machinery was up and running. Consequently, the Peruvian company turned to Schaeffler for help in mounting the bearings. The scope of services to be provided included:

- Developing the appropriate mounting procedure in collaboration with the experts from the Schaeffler ASB Grinding Mills Competence Centre in Melbourne, Australia.
- Expert mounting assistance and consulting services supplied by local Schaeffler engineers.
- Fast, professional mounting of the four large-size bearings by experienced Schaeffler technicians.

Customer benefits:

Thanks to the seamless collaboration between the local Schaeffler engineers and the experts from Melbourne, the customer received a solution that was perfectly matched to his needs. Having the bearings professionally mounted by Schaeffler ensured that the machinery in the tube mill would operate reliably. The risk of bearing failure and the resulting machine downtime, which would cost over € 700 000, was significantly reduced.

Learn about other Global Technology solutions at www.global-technology-network.com

Additional information:

Would you like to learn more
about the Global Technology Network?

Visit our Web site at
www.global-technology-network.com

There you can learn about

- how the Global Technology Network can help you, too,
- how other customers have already benefited from the Global Technology Network,
- and further details about this exciting concept.

For more information
about Schaeffler as well as
our products and services,
please visit our Web site at
www.schaeffler.com





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Issued: 2012, September

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