

## FAQ

### GENERAL / BASIC PRINCIPLES

**Question:** How long has REWITEC<sup>®</sup> been operating in the marketplace and in what regions?

*Answer:* The company has existed since 2003 and operates globally.

**Question:** What are the main areas of use for REWITEC<sup>®</sup> products?

*Answer:* The products are used in what are known as 'tribological systems', for example gearboxes, bearings and internal combustion engines of every kind. They can be used in practically any sector, with our main target markets including wind energy, shipping, thermal power plants, general industry and automotive.

**Question:** How do REWITEC<sup>®</sup> products actually work?

*Answer:* A chemical/physical reaction of the active agents produces an optimisation of friction levels and passivation of the metal surfaces, which ultimately leads to less wear inside the component, greater energy efficiency and an optimised service life (more details under 'Technology' below).

**Question:** Which REWITEC<sup>®</sup> product lines are intended for which components?

*Answer:* PowerShot<sup>®</sup> is the product for internal combustion engines, DuraGear<sup>®</sup> is for use in industrial gearing units, G5 is for passenger car gearboxes, GR400 (grease) is designed for applications in bearings, PowerSpray is an all-purpose spray for domestic use and ChainSpray is used for two-wheelers and chain conveyors.

**Question:** Are REWITEC<sup>®</sup> products an additive?

*Answer:* In the literal technical sense, yes. However, (in contrast to all other conventional additives) they exert their effect not on the lubricant qualities, but instead use the oil or grease as a 'means of conveyance' in order to transport the active components in the mixed friction range to the metal surfaces' hot spots, where they then react. We therefore see REWITEC<sup>®</sup> products not as additives, but instead much more as surface refiners.

**Question:** Can REWITEC<sup>®</sup> products only be used on relatively old equipment, or can they be used on newer / new plant as well?

*Answer:* Thanks to their surface-refining effect, our products are particularly effective on older units that have already been worked hard. They can freeze the advance of any damage or nascent micro-pitting and (within the bounds of physics) even have a repairing effect. However, it also makes sense to use them on newer/new equipment, as the effect is preventative and helps to prolong service life and increase efficiency.

**Question:** What services does REWITEC<sup>®</sup> offer besides the actual products?

*Answer:* Advice on product use, assessments of plant condition, application of the products on site, surface documentation by means of micro-imprints with subsequent microscopic-visual evaluation (before/after comparisons).



Please visit us:  
[www.rewitec.com](http://www.rewitec.com)

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**Question: Where can REWITEC<sup>®</sup> products be bought?**

*Answer:* Around the world there are numerous dealers and agents, who operate respectively within their regions and target industries. The consumer products are available from our online shop. More information on where you can get our products can be found on our website [www.rewitec.com](http://www.rewitec.com) in the ‚Sales‘ section.

**Question: What references does REWITEC<sup>®</sup> have?**

*Answer:* Over the years we have had the privilege of supplying a very large number of satisfied customers, across a very wide range of industries and target groups. From small SMEs all the way up to global groups. You will find a selection of these on our website [www.rewitec.com](http://www.rewitec.com) in the ‚References‘ section.

**Question: Has the effectiveness of REWITEC<sup>®</sup> products been proved by any independent scientific tests?**

*Answer:* For many years now we have had our products scientifically examined and put through tough, independent stress tests at institutes such as Frankfurt Technical University, Mannheim University (Tribology Centre of Excellence) and Gießen University (Chair for Nano-Tribology). We publish the results of these tests regularly in our company documentation and on our website [www.rewitec.com](http://www.rewitec.com).

**Question: Does any warranty / product liability apply at REWITEC<sup>®</sup>?**

*Answer:* We offer the statutory warranty on our products and there has been product liability insurance in place for our company with HDI-Gerling since 2004, against which, however, there has to date never been a claim.

**Question: What actually is ‚tribology‘?**

*Answer:* Tribology (Greek: the study of friction) encompasses the academic description of friction, wear and lubrication, plus the development of technologies to optimise friction processes, which are also referred to as „interacting surfaces in relative motion“ or a „tribological system“. [Source:Wikipedia]

**Question: Is REWITEC<sup>®</sup> also present online on social networks?**

*Answer:* Yes, we are on both facebook ([www.facebook.com/RewitecGmbH](http://www.facebook.com/RewitecGmbH)) and YouTube ([www.youtube.com/rewitecde](http://www.youtube.com/rewitecde)) and look forward to you visiting us there!

### USER BENEFITS

**Question: What are the main advantages of using REWITEC<sup>®</sup> products?**

*Answer:* The result of assemblies being treated with this surface smoothing is primarily a reduction in the friction within these systems, which as a consequence reduces the mechanical strain put on the components and the thermal loading of the whole system. This is accompanied by an optimisation of energy efficiency and durability.

**Question: How does using REWITEC<sup>®</sup> products create potential savings?**

*Answer:* Through working as described above the products reduce loading on treated components, which can

result in an extended service life, optimised maintenance cycles, longer lubrication intervals, lower replacement parts costs and many other benefits. Energy consumption (e.g. by drive systems and engines) can be lowered, which additionally reduces expenditure for the operator. Taking wind turbines as an example, improved energy efficiency also makes it possible to achieve a greater electricity yield and thus a higher level of income.

**Question: Over what period do REWITEC<sup>®</sup> products pay for themselves?**

*Answer:* It is not possible to give a blanket answer to that, as it depends on the parameters of the equipment treated. However, in comparison to other optimisation measures the amortisation times are surprisingly short and sometimes just 1-2 months!

**Question: What influence do REWITEC<sup>®</sup> products have on internal combustion engines in terms of fuel consumption and emissions?**

*Answer:* Academic tests at Frankfurt Technical University showed as far back as 2007 that fuel consumption can be cut by up to 11% (NEDC). Practical tests with cars and commercial vehicles generally come out at around 5-10%. Emissions go down by as much as 63%!

**Question: It is well known that REWITEC<sup>®</sup> products are widely used in the wind power industry. Is there a summary anywhere of all the turbine types that have been treated?**

*Answer:* You will find an up-to-date summary on our website [www.rewitec.com](http://www.rewitec.com) in the 'Downloads' section.

### TECHNOLOGY

**Question: What in concrete terms is the effect of REWITEC<sup>®</sup> products?**

*Answer:* They significantly reduce (primarily through surface passivation) the friction levels of treated components and thus simultaneously ensure less wear, lower system temperatures and as a result have the effect of prolonging service life.

**Question: What influence do REWITEC<sup>®</sup> products have on the temperature conditions inside the treated assembly?**

*Answer:* After using our agents, many users identified a noticeable to significant drop in temperature, which naturally varied due to the differing machine parameters and parameters of use. Scientific studies at Mannheim University showed a reduction in oil temperature of 20%.

**Question: Can REWITEC<sup>®</sup> products repair existing damage, e.g. on the surfaces of tooth flanks?**

*Answer:* Yes, to a certain degree (within the bounds of what is physically possible) even existing micro-damage can be 'repaired'.

## FAQ

**Question: Is it necessary to do an oil change?**

*Answer: Ideally, any treatment using our products takes place in relatively new oil and with new appropriate oil filters and not shortly before a planned oil change. However, it is not absolutely necessary to carry out an oil change prior to using our products.*

**Question: Does the surface hardness of treated materials get altered?**

*Answer: The surface hardness of treated materials does not get altered through treating with REWITEC®. They retain their original hardness.*

**Question: How long does the REWITEC® coating last / how often must a component be retreated?**

*Answer: After having its initial treatment, we recommend that equipment has follow-up treatment every year. This can then be done with a lower dosage of active agents and thus at a much lower price.*

**Question: Is it possible to see the positive effects of REWITEC® products in condition monitoring systems (CMS)?**

*Answer: Generally yes, as with CMS what predominantly gets recorded are acoustic (damage) frequencies being produced by pre-damaged components. Once the latter have been optimised through the use of REWITEC® products, the noises and vibrations usually go down and can be verified in the CMS logs. We have been working closely with major CMS providers in this area for many years.*

**Question: Are there any negative effects on other materials, e.g. sealing gaskets or similar?**

*Answer: No, because REWITEC® products have an effect solely on metal surfaces (e.g. steel, iron, brass, white metals, etc.). They do not, therefore, affect other (sealing) materials.*

**Question: Do complete gearboxes, bearing and engines (i.e. all individual components) get coated or just certain parts of them?**

*Answer: No, the physical/chemical coating process for applying REWITEC® products calls for certain general conditions, in particular pressure and temperature. The coating is therefore preferably done on 'hot spots' and definitely not all over on absolutely every part of a component or assembly.*

**Question: Do the grooves deliberately applied to the cylinder linings get negatively affected?**

*Answer: No, we are not aware of any case where grooves have become clogged up and thus caused consequential damage (such as, e.g., 'piston jamming').*