



Product Working Principle:

WEARTEC's product development aims to make a positive sustainable impact on our environment with this innovative component solution.

Our product development finds application in the fields of all kinds of combustion engines, gearboxes, bearing components and with that we work in the business fields of maritime, wind power, mining, steel, automotive and other comparable drive system industries.

It is used everywhere where wear and therefore abrasion occurs, despite a lubricating film.

WEARTEC:

- decisively improves the contact pattern, minimizing the lubricating friction and with that lubricant wear
 - improves the seal between piston and bushing
 - increases the service life of the aggregates
 - ensures machine performance, with reduced maintenance effort
 - gives operational safety
 - reduces fuel consumption, emissions as well as NOx in the single-digit %-range, to name only a few advantages.
- Further, there is a fine particle reduction in the double-digit %-range

The working principle: results from our nano-microparticle concentrate which is premixed with the respective oil / grease in small quantity! It is transported with the help of the respective lubricant - as a carrier to the loaded surface. By temperature and friction energy we connect the concentrate with the surface - valleys are filled - a homogeneous contact pattern develops, the roughness is reduced, the wear is minimized!

Specifically expressed:

The component solution works where about a 1-5 micrometer thin lubricating film is under high pressure - such as in gears and bearings. But also, on larger surfaces such as cylinder liners and piston rings with a lubricating film of about 15-20 micrometers with lower pressure but high relative speeds between piston ring and liner.

We assume that the more homogeneous combustion also results in a cleaning effect on the cylinder liner, the piston rings, the pistons, the valves, the valve seats and the exhaust gas channel

There is a better contact pattern on the piston ring and with that a better piston ring density which has a very positive effect. The parameters in the entire engine such as, for example, camshaft, valve guide, turbocharger bearing and crankshaft bearing are optimized through improved running smoothness. The cylinder honing does not get effected since we work in microns and only smooth out the surface peaks.

Improvements are also occurring in the areas of:

- | | |
|-------------------------------|---------------------|
| - Blow-By | - Temperature |
| - Lubricating oil consumption | - Vibration - noise |
| - Fuel consumption | - Wear and tear |
| - Emissions | - Micro pitting |

Note: Basically, our concentrate is compatible with all oils and grease.

Also, with special lubricants from customers - and with polyglycol oil we adapt it accordingly.



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www.weartec.de

