ceramicspeed bearings

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CeramicSpeed have been an official Pro Tour sponsor since 2006.
Today we are the official sponsor and bearing supplier for several of the Tour's largest teams, including Tinkoff-Saxo, Omega Pharma – Quick-step and Astana.
Photo: Bettiniphoto.net

industry

ceramicspeed bearings

We brought space-age technology down to earth

....and created the basis for significant savings in the industrial universe

CeramicSpeed produces and supplies a complete range of ball and roller bearings, which perform significantly better than traditional steel bearings. These bearing solutions help industrial companies to optimise production and competitiveness.

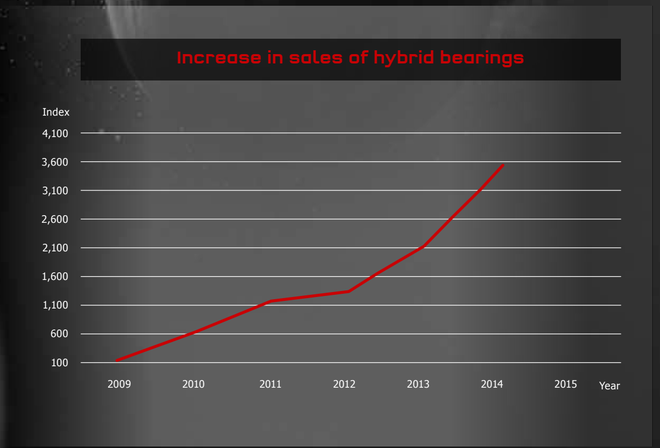
The demands placed on the components used in the industry are ever increasing. Traditional materials, such as steel, are pushed to the limits of their capabilities. New material technologies, utilising ceramics and nano coatings, increase the potential for further optimisation.

At CeramicSpeed, we have spent the last 15 years working exclusively with hybrid bearings. In the sporting world, athletes using our bearings have won countless competitions. We are the World leaders in our field, and the only bearing manufacturer to have sponsored several of the world's largest cycling teams since 2006.

Hundreds of industrial companies have achieved significant reductions in their operating costs by optimising with CeramicSpeed bearings. Companies are moving away from the traditional approach of replacing bearings on a regular basis, and are now using bearings that last.

At CeramicSpeed, our aim is to increase both awareness and availability of the best bearing solutions.

CeramicSpeed's founder, Jacob Csizmadia, has worked on the development of ceramic bearings for more than 15 years.



Our product range consists of eight LongLife series, which fulfill all industrial needs in terms of bearing type, size and properties. The range also includes custom built bearings. Our product range beats standard bearings in all areas.

Bearings that last!

The cost of the bearings themselves is often minor in comparison to the costs of the machines in which they are installed. This applies equally in new equipment, and in operation and maintenance of existing equipment. However, the cost of bearing maintenance can be many times higher than the cost of the bearing itself. We combine bearing optimisation with an extended lifetime, thereby providing a potential for significant savings.

4-8 times longer lifetime

99.4 % of CeramicSpeed bearings last at least 4 times longer than the traditional bearings they replace. In 50 % of cases they last 8-20 times longer.

The increased investment in a CeramicSpeed hybrid bearing solution is, on average, returned within the 1st or 2nd lifetime of a traditional bearing. Where bearings have a lifetime of less than 1-2 years, this equates to a significant reduction in operating costs.

In addition to increased lifetime, CeramicSpeed hybrid bearings provide a number of other advantages, which contribute to improved production efficiency.

70 % reduced energy loss

The results of our ELFORSK project document that the operating temperature of CeramicSpeed bearings is 14-47 °C lower than that of standard bearings. In addition the energy consumption is 70 % lower. These results contributed to CeramicSpeed winning the ELFORSK award 2013.

Optimising
with CeramicSpeed hybrid bearings...

Reduced operating costs

Simplified maintenance planning
You systematically remove the bearings which interrupt production and constrain your production capacity. Instead of regular bearing replacement, hybrid bearings allow you to carefully plan for few larger maintenance programmes.

Reduced maintenance costs
Labour and material costs associated with replacing bearings inevitably exceed the price of the actual bearing several times over. This means that hybrid bearings with 4-8 times longer lifetime can reduce the total maintenance costs significantly.

Increased productivity
Less frequent bearing failure and replacement reduce the need for both planned and unplanned production stoppages. This leads to improvements in consistency and performance in your production.

Increased performance
Long lasting precision bearings can improve the performance and precision of your machinery, as they increase operational stability throughout the lifetime of the bearing. This reduces the need for calibrations and adjustments to compensate for wear.

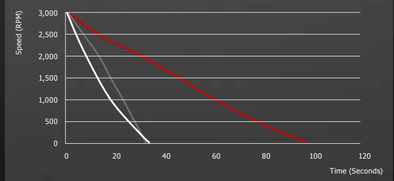
Increased competitiveness
CeramicSpeed bearings simplify planning maintenance. This translates to reduced labour hours and costs, meaning that CeramicSpeed bearings typically pay for themselves by the 1st or 2nd lifetime of a traditional bearing. Including bearings in calculations of production efficiency highlights the size of potential savings, and the potential to increase your competitiveness.

Save energy
– take advantage of our guarantee ...

70 % reduction in bearing energy loss
In 2013 CeramicSpeed won the ELFORSK award for a project which documents that CeramicSpeed bearings can reduce bearing energy loss. The project ran over three years, and was carried out in cooperation with leading industrial manufacturers.

The project demonstrates that CeramicSpeed bearings have an operating temperature which is 14-47 °C lower than that of standard bearings. Run-down time, which is 3 times longer for CeramicSpeed hybrid bearings, provides another effective illustration of the energy saving properties of CeramicSpeed bearings. The results of the ELFORSK project document that CeramicSpeed bearings consume 70 % less energy.

Run-down time for a Grundfos MG100LC2 motor with standard steel bearings from two other manufacturers (white/grey) and CeramicSpeed (red)



The run-down time measured for the standard steel bearings (two well-known manufacturers) and CeramicSpeed hybrid bearings, demonstrates that the lower friction in hybrid bearings increases the run-down time by almost three times.

NO RISK guarantee
We guarantee that your investment in CeramicSpeed bearings will be repaid in direct savings in maintenance costs (labour + materials). When steel bearings, that lasts for one year or less, are exchanged with CeramicSpeed hybrid bearings we offer a NO RISK Guarantee. If the investment in CeramicSpeed bearings is not in accordance with our ROI proposal, then we will provide you with new bearings for the machine in question.

For bearings which currently last longer than one year, we will offer an equivalent NO RISK Guarantee, on an individual basis.

Guarantee against stray currents
Silicon Nitride balls (Si_3N_4) are nonconductive. As a result, stray currents are unable to run through a CeramicSpeed ball bearing. The bearings are able to withstand voltages 80-800 times higher than the voltages, which steel bearing with insulation coated rings can withstand (up to 1-3 kV). In other words, the electrical insulation protection of the CeramicSpeed bearings are 80-800 times larger than for insulation coated steel.

At high temperatures and high frequencies, the insulation protection of an insulation coated steel bearing decreases to critical levels while the CeramicSpeed bearing maintain a very high insulation protection. In addition, the insulation protection of insulation coated steel bearing will decrease dramatically if scratches appear during mounting - a problem that does not exist with CeramicSpeed bearings.

Scratches and high temperatures can cause traditional insulation coated steel bearings to fail due to stray currents. With the CeramicSpeed bearings we provide you a guarantee against stray currents. If the bearing is damaged by stray currents, we will replace the bearing free of charge.

Improvements and savings
There is considerable potential for improvement! More than 99 % of all CeramicSpeed bearings last at least 4-8 times longer than the traditional steel bearings which they replace. The extra investment is usually repaid within the 1st or 2nd lifetime of a traditional bearing.

Over the past few years, several hundred industrial companies have experienced how quickly their investment in CeramicSpeed bearings has been repaid. They have achieved significant savings, as well as enjoying additional benefits such as increased productivity and simplified maintenance planning.

CeramicSpeed hard facts – speak for themselves

Ceramic balls are hard without being brittle; you can even hit them with a hammer. – Give it a try!

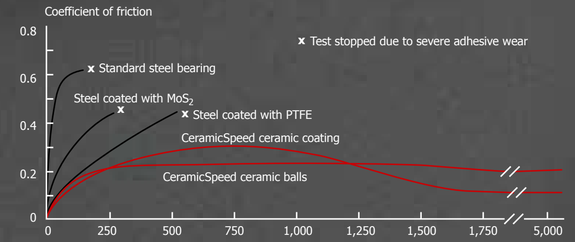
The most important elements in CeramicSpeed hybrid bearings are the ceramic balls and ceramic coated rollers. We combine these hi-tech components with our know-how on how they, together with the rest of the bearing, can create significant improvements.

Both ball and roller elements have unique properties, which beat steel balls and steel rollers in every way.

The quality of our Silicon Nitride balls meets the most stringent industrial demands, including those set by the aeronautics industry. There are only a few manufacturers in the world capable of meeting these demands.

The ceramic coating is based on nanotechnology, which is used to apply a diamond compound in a micron-thin layer.

Coefficient of friction for different materials



MoS_2 = Molybdenum disulfide

PTFE = Polytetrafluoroethylene (Teflon®)

CeramicSpeed ceramic balls – Silicon Nitride

Extreme wear resistance

CeramicSpeed Silicon Nitride balls are **2.3 times harder** than hardened steel balls.

Reduced need for lubrication

CeramicSpeed balls are **400 % smoother** than steel.
The coefficient of friction against steel is 0.2, whereas it is 0.8 for steel against steel.

No seizure or micro-welds

The surface smoothness of the Silicon Nitride balls has a polishing effect. This helps prevent seizure and micro-welding in the races – which can be a problem with steel balls.

High resilience to foreign particles and corrosion

Ceramic balls don't rust. The balls crush any foreign particles that enter the bearing, polishing out any damage to the races.

Low friction

Ceramic balls are rounder, lighter and smoother than steel balls. They have lower friction, and therefore a lower energy loss.

Optimising the other components in the bearing makes it possible to achieve extremely low friction – without reducing lifetime!

Increased stiffness and reduced vibration

The ceramic balls are **163 % stiffer** than steel balls. They are also rounder and smoother, which reduces vibration.

Reduced weight

Silicon Nitride is **58 % lighter than steel**, which reduces inertia, and thereby reduces the load on the other bearing components. This means that the bearing's max RPM can be increased by 30-50 %.

	Difference	CeramicSpeed Balls Si_3N_4 (ball bearings)	Steel Balls (ball bearings)	CeramicSpeed ceramic coating (roller bearings)	Difference
Density [g/cc]	58 % lighter	3,2	7,6	7,6	0 %
Hardness [Vickers]	229 % harder	1600	700	2800	400 % harder
Elastic Modulus [GPa]	163 % stiffer	310	190	190	0 %
Linear thermal Expansion Coefficient ($10^{-6}K^{-1}$) [RT to 800 °C]	70 % lower	3,7	12,3	12,3	0 %
Max Usage Temperature [°C]	680 °C higher	1000	320	500	180 higher
Surface Finish Grade 5 [micron]	400 % smoother	0,005	0,02	0,02	0
Coefficients of friction. Static friction against steel μ_s	75 % lower	0,2	0,8	0,1	88 % lower
Electrical Resistivity [Ω-cm] *	10^{22}	10^{14}	10^{-8}	$> 10^{-8}$	> 0
CeramicSpeed bearing optimization factor L_{10} CSB**	900 %	9	1	4,5	450 %

* 10^{16} = insulator and 0 = superconductor

** Optimisation factor: factor used to calculate expected lifetime L_{10} CSB (see graph on page 9)

CeramicSpeed ceramic coating - Diamond and carbon compounds

Extreme wear resistance

The coating forms an extremely hard and flexible surface, which is 4 times harder than hardened steel balls.

Reduced need for lubrication

The carbon content of the coating has a self-lubricating effect; carbon transferred to other surfaces lubricates the other bearing components. The coefficient of friction against steel is 0.1. In comparison it is 0.8 for steel against steel.

No seizure or micro-welding

The surface smoothness of the coating, carbon transfer, and the fact that the materials in contact with one another are different, prevent the development of seizure and micro-welds in the races.

High resistance to foreign particles and corrosion

The ceramic coating is corrosion resistant. Any foreign particles which enter the bearing are crushed, and damage to the rollers is much less frequent.

Low friction

The ceramic coating reduces the coefficient of friction, thereby reducing friction and energy loss. Optimising the other components in the bearing makes it possible to achieve extremely low friction – without reducing lifetime!

Reduced vibration

As the carbon in the coated rollers works its way into the races, the rolling properties of the bearing are improved, thereby reducing wear, friction and vibrations.

See ceramicspeed.com for further details

LongLife Series
- Hi-tech bearing solutions...

CeramicSpeed supplies a complete range of ball and roller bearings. They are sorted into eight LongLife series, each specifically developed for their individual application.

LongLife Xtreme

Bearings for contaminated environments, where particles can enter the bearing and affect its performance. The extreme hardness of the balls means that they simply crush any foreign particles which enter the bearing. Xtreme bearings last at least 4-8 times longer than standard steel bearings.

LongLife Corrotec

Bearings which are specially developed for humid environments. The bearing that takes over when traditional stainless steel bearings give up. Stainless steel races, ceramic balls, synthetic cages and the optimal lubricant combine to form bearings with unique properties in terms of resistance and lifetime. Food industry approved lubricant is used in LongLife Corrotec bearings. The range is also available in fully FDA approved bearings.

LongLife Insulate

CeramicSpeed hybrid bearings for electric motors and other environments where it is necessary to prevent stray currents from passing through the bearing. The CeramicSpeed balls are nonconductive and we provide a guarantee against stray current. Additionally, LongLife Insulate bearings reduce energy loss in the bearing by 70 %.

LongLife HighTemp

Ceramic balls and hi-tech components are combined to create a unique HighTemp series, for use in operating environments of up to 260 °C and 350 °C. This is largely made possible by the ceramic balls, which expand 70 % less than steel balls.

LongLife HardCoat

A coating with extremely good friction and wear reducing properties. The greatest hardness and lowest friction are achieved by using LongLife HardCoat - a flexible coating, which follows the material and doesn't flake.

LongLife CorroCoat

LongLife CorroCoat has excellent rust-protection and friction reducing properties. The coating also has good wear reducing properties.

LongLife WearCoat

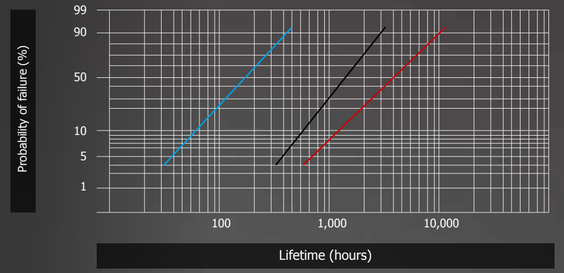
A coating which is extremely effective in reducing wear and friction. The coating also offers limited protection from rust.

LongLife CustomBuild

If you can't find the bearing solution you need in our standard LongLife series, then we also offer custom built bearings. We develop custom bearing solutions to meet new challenges; these solutions are often developed in collaboration with our customers.

Lifetime Calculator

Medium to hard operation (load, lubrication, contamination, temperature)



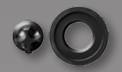
Standard steel balls and steel roller bearings

CeramicSpeed hybrid roller bearings – ceramic coated rollers

CeramicSpeed hybrid ball bearings – ceramic balls

The bearings were tested under identical conditions. In comparison with standard steel bearings, the two types of CeramicSpeed bearings have a lifetime which is 4-20 times longer.

CeramicSpeed LongLife Series

Hybrid bearings with ceramic balls	Roller bearings with ceramic coated rollers	Linear systems with ceramic balls	Silicone Nitride balls	Sealing systems	Coated parts
					

Consultancy

Hybrid ball bearings with ceramic balls

CeramicSpeed hybrid bearings with ceramic balls of the highest quality. A complete series of ball bearings of all types and sizes:

- Deep groove bearings
- Thin section bearings
- Four point contact bearings
- Self-aligning bearings
- Thrust bearings
- Double row bearings
- Angular contact bearings
- High speed precision bearings
- Y/UC bearings

Bearing solutions for all environments – including your production facility, which help you to simplify maintenance planning and reduce operating costs.

Hybrid bearings that provide solutions when other bearings give up

CeramicSpeed bearings provide solutions for a wide range of situations, including operating environments with high levels of contamination from water, dust, dirt and metal. They are also a good solution where bearings are subject to frequent start/stop or fast acceleration.

In tough operating environments, with uneven loads, high temperatures, vibrations, shocks and bumps, you will find that hybrid bearings have a significantly longer lifetime, and thereby generate economic benefits.

Ceramic coated roller bearings

CeramicSpeed have a complete range of roller bearings of all types and sizes:

- Cylindrical roller bearings
- Tapered roller bearings
- Spherical roller bearings
- Barrel roller bearings
- Thrust roller bearings

The windmill industry has, among others, played a role in introducing roller bearings to industrial use. Ceramic coated roller bearings achieve a longer lifetime in situations where the bearing operates under insufficient load.

Roller bearings provide a wide range of solutions

Ceramic roller bearings provide a solution in contaminated environments, where bearings don't run optimally as a result of contamination, for example water, dust, dirt and metal. CeramicSpeed roller bearings have a longer lifetime in these environments.

This also applies in environments where operating conditions are problematic because of frequent start/stop, high temperatures or uneven loads. The unique properties of ceramic coated roller bearings generate economic benefits in these environments.

Linear motion systems with ceramic balls

CeramicSpeed supply a complete range of linear motion systems of all types and sizes, which optimise production in a wide range of applications. Our product range includes:

- Ball rail systems
- Ball screw systems
- Linear bushing systems

Linear motion systems with high operational reliability

CeramicSpeed linear motion systems are a highly resilient product with a long lifetime. It makes good economic sense to optimise linear motion systems in situations where it is necessary to prevent critical breakdowns. Examples are packing machines/lines, production lines, lifting stations and processing centres.

Optimising with CeramicSpeed products improves uptime and have economic benefits where stoppages have serious consequences.

Read more at: ceramicspeed.com/industry/en

Unique properties
- that make a difference

CeramicSpeed Silicon Nitride balls

CeramicSpeed use Silicon Nitride balls of the highest quality, which meet the most stringent industrial demands, including those set by the aeronautics industry. There are only a small number of manufacturers in the world capable of meeting these demands. CeramicSpeed balls provide solutions for:

- Hybrid bearings
- Heat and electrical insulation
- Hydraulic valves
- High pressure valves
- Fuel pumps

Properties that make a difference

The hardness of the balls means that they can withstand high levels of contamination, and will usually crush any foreign objects which enter the bearings. Silicon Nitride does not rust and the balls are therefore resistant to water and cleaning materials.

CeramicSpeed balls are nonconductive, and are therefore a good solution to problems caused by stray currents in bearings. The hardness and stiffness of the balls means that they can resist shocks and bumps, making them highly suitable for hard operating environments.

Sealing systems

We have an extensive and flexible range of special sealing systems, to fit bearings of most types and sizes. We have solutions for all operating environments, which can be customised to fit your equipment – including solutions in corrosion resistant materials and for high temperature operation. Sealing systems include:

- GCS - Grease Chamber Seals
- BPS - Back Plate Seals
- Viton Seals
- Teflon Seals

Seals with extra protection

Sealing systems offer improved protection from penetration, and are suitable for flanged bearings. As well as offering excellent protection, they are easy to install.

CeramicSpeed sealing systems meet the stringent demands of the food industry, as they can be manufactured from food industry approved materials. Seals offer excellent protection and reduce breakdowns, thereby increasing production uptime.

Coated parts

CeramicSpeed supplies coatings for all types of steel – including stainless steel. We have solutions for all environments, and CeramicSpeed coatings can be used for:

- Axels
- Bushings
- Housings
- Pistons

Coatings that increase lifetime

CeramicSpeed supplies three different coatings for different applications: HardCoat, WearCoat and CorroCoat. All three are developed to increase the lifetime of your parts, and ensure a lifetime which is 2-4 times longer. This reduces breakdowns and increases your production efficiency.

CeramicSpeed coatings also reduce the need for lubrication as well as increasing corrosion resistance.

Read more at: ceramicspeed.com/industry/en

Coatings -
A strong alternative...

Coating without modification

Ceramic coatings come in many different forms. Together with our partners, we have selected the best solutions.

Whether applied to rollers in roller bearings, or other components, selecting the best coating will give you a number of advantages.

Our coatings are applied in micron thin layers, meaning that they can be applied to components without any further modifications. Coatings are applied at a low temperature, therefore the components are not damaged in the process.

Coating transfer effect

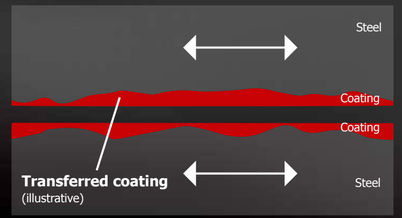
Coated components help to prevent damage from wear, corrosion, adhesive wear and friction, thereby increasing the lifetime of your parts. In simplified terms, HardCoat/WearCoat is a carbon/diamond layer, which is extremely durable and acts as a dry lubricant.

In the illustration on the right, you can see how the ceramic coating is transferred to the surface of the uncoated components. The result is a better, more precise and stronger contact surface.

Our experienced technicians are always available to give you specialist advice regarding the application of our coatings.

Before break in

After break in



The unique properties of the ceramic coating mean that as well as being extremely hard, it also polishes the uncoated components. The carbon content means that the coated roller transfers coating to the uncoated steel races. This reduces wear, friction and vibration significantly.

The ultimate bearing solutions are available to all...

At CeramicSpeed we are leaving our mark

Optimisation consultancy

We take a holistic approach to bearing solutions, taking both the bearing itself and its operating environment into account. We work closely with our customers, to find the best bearing solution for the individual operating environment.

Optimisation is a natural and integrated part of our work. Years of experience means that we can offer a number of services.

- **CeramicSpeed BlackBox – bearing analysis**
  Use CeramicSpeed's BlackBox to collect your worn bearings. Worn bearings are a valuable source of information, which we use to find the best bearing solution for you.
- **Lubrication**
  Our work with specific bearing solutions has provided us with a great deal of experience regarding lubrication, which is an important factor in bearing lifetime.
- **Seminars and courses**
  Good results require awareness of the solutions available. We arrange seminars and courses in bearing optimisation, where we, among other things, highlight the potential for savings.
- **Bearing strategy**
  We help to identify where it will be most profitable to implement CeramicSpeed hybrid bearings in your production.

Applications

There are no limits. It's all about finding the optimal solution, where hybrid bearings offer the greatest savings in maintenance costs, improvements in production efficiency and increases in competitiveness.

We have a great deal of know-how and experience in advising in this area. This is why so many companies, in a wide range of industries, use CeramicSpeed bearings.

Examples of where to use CeramicSpeed hybrid bearing

High RPM

- Electric motors
- Ventilators
- Pumps
- Compressors
- Separators/Decanters
- Centrifuges
- Whisks & stirrers
- Checkweighers
- Saws
- Drills
- Brushes
- Meat saws/bandsaws
- Pickers/scolding chambers

Low RPM

- Conveyor belts
- Freezers
- Conveyors
- Mincers
- Open/close functions
- Cart wheels
- Belts and sprockets
- Forklift mast bearings

Other

- Packing/filling machines
- Ovens
- Robots
- Robot stations
- Ball valves
- Linear rails
- Crushers
- Rolling machines

Arla Foods

Mixer

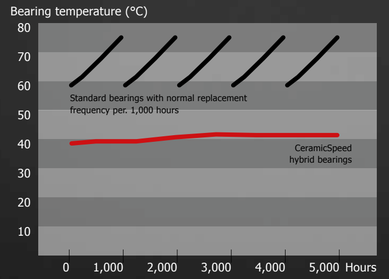
- Operating temperature reduced from 80 °C to 40 °C
- Bearing lifetime is increased by 5 times

Maintenance manager Ove Raabjerg Nielsen, from Arla Foods Hoco, contacted CeramicSpeed in 2008.

It was necessary to improve the operating stability of a grinding mill. The mill operated at 5,000 RPM and the bearings were replaced every 1,000 operating hours. The motor was permanently monitored, and shut down when the bearing temperature reached the critical limit of 80 °C.

By replacing the standard bearings with CeramicSpeed hybrid bearings (with food industry approved grease), the operating temperature was reduced, and the motor now maintains a consistent operating temperature approximately 35 °C under the critical level.

Bearing temperature development
at different operation times



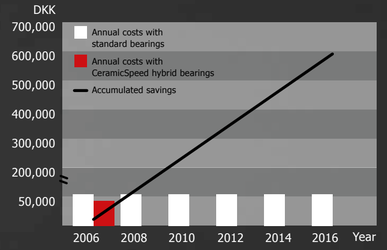
C & D Foods

Bag closer

- An increase in lifetime of 32 times – and the bearings are still running!
- The extra investment in CeramicSpeed bearings was returned within the 1st year
- A saving of over 250,000 DKK over 5 years

Until 2005 the bearings in C&D Foods' bag closing machine were replaced every 3 months.

Investment in CeramicSpeed bearings
Annual costs and accumulated savings in DKK



The original CeramicSpeed bearings, which were installed in 2006, are still running today. This represents an increase in lifetime of more than 20 times in comparison to the steel bearings used previously.

The total investment in CeramicSpeed bearings was 40,000 DKK. Savings in direct costs alone meant that this was returned in less than 1 year. By 2011 the new bearings had saved C&D Foods over 250,000 DKK – as well as a lot of work. Maintenance manager Joern-Erik Johannesen has since installed CeramicSpeed bearings in several other machines in the factory.

Grundfos

Electric motor

- CeramicSpeed bearings are utilised in demanding operating environments
- The price premium for a CeramicSpeed bearing is significantly less than calling a technician out

Grundfoss have utilised CeramicSpeed hybrid bearings in their electric motors since 2005. CeramicSpeed bearings are used where motors operate in demanding environments. For example, where there are stray currents, imbalances, vibrations, contamination or other condition which mean that the lifetime of standard bearings is dissatisfactory.

The price premium for a CeramicSpeed bearing is significantly less than the price of calling a technician out to replace a failed bearing.

Danish Crown

Production up-time is essential for efficiency

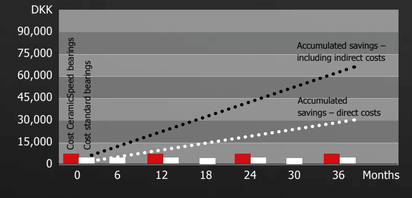
- Saved 20,000 DKK in the first year - on a single machine
- Significant savings on bearing replacements and lost production
- Eliminated critical breakdowns

Danish Crown wanted to automate a saw that was previously operated manually.

"We've achieved significant savings", states Christian Frederiksen from Danish Crown and continues: "Including installation costs and the costs associated with production stops, we've saved 20,000 DKK over the first year on a single saw. Now we're in the process of implementing the same solution on other machines".

Automation means that the production speed on the slaughter line is extremely high. The lifetime of individual machine parts has become increasingly important, as machine uptime has become even more important in maintaining efficient production – and maximising the potential of automation.

Costs and savings resulting from changing to CeramicSpeed bearings

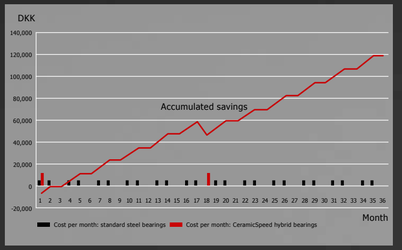


Haldor Topsøe

Increased the bearing lifetime in a grinding machine by 13 times

- A lifetime which is 13 times longer than for steel bearings
- Total savings of 40,000 DKK during the first year

Budget forecast and basis for investment decision: 4 pcs. FY40 bearings for a grinding machine



The grinding machine is placed in a room where protective equipment is mandatory. In order to avoid production stoppages, the bearings were replaced every 3-4 weeks. Based on an analysis of the worn out steel bearings CeramicSpeed suggested implementing CeramicSpeed LongLife Xtreme bearings.

The CeramicSpeed bearings were first replaced after 18 months, an increase in lifetime of 13 times!

The price of the CeramicSpeed bearings was 6,000 DKK higher, but within the first year the company had saved a total of 40,000 DKK.

Read more CeramicSpeed case studies at:
www.ceramicspeed.com/industry/en

Rold Skov Savværk

Cutting down on the costs of bearing replacement

- CeramicSpeed bearings have been implemented in all relevant applications in the sawmill
- A saving of 280,000 DKK over 4 years
- Bearing purchase costs have been reduced by 60 %

The first CeramicSpeed bearings were installed at Rold Skov 4 years ago, in their pressure impregnation plant. The same bearings are still running! The saw was the next to be optimised. Standard bearings normally lasted a maximum of 3 months. A LongLife Xtreme bearing was installed on one side, and a HardCoat roller bearing on the other side. The saw is still running – with the same CeramicSpeed bearings.

Today CeramicSpeed bearings are used in all applications where bearing failure can lead to a breakdown. For Rold Skov, this has resulted in a 60 % reduction in bearing purchase costs, and a saving of 280,000 DKK over 4 years.

Calculation of time and materials used on bearing maintenance