

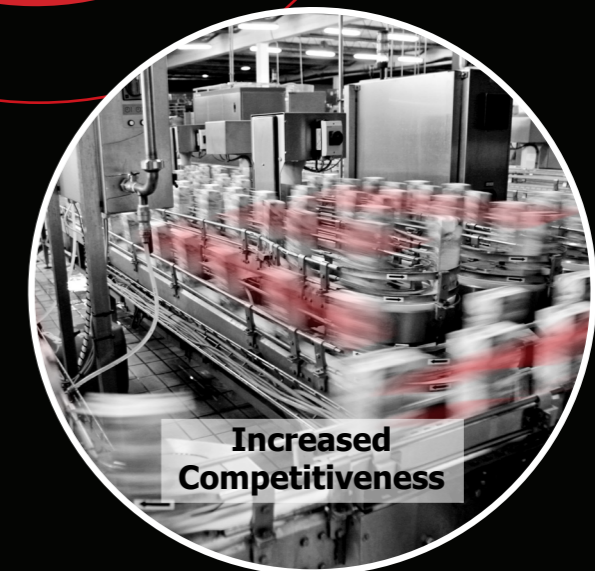
Bore diameters from 5-200 mm	Deep groove ball bearings Series: 618, 619, 60, 62, 63 og 64	Angular contact ball bearings Series: 718, 719, 70, 72, 73, OJ2 og OJ3	Spherical roller bearings Series: 108, 1213, 22 og 23	Thrust ball bearings Series: BA og 51	Y/UC Bearings Series: YAR/YAT/YET/UC mv.	Linear guides Series: Linear, nuts etc.
LongLife Series	CeramicSpeed Xtreme	F S E	F S E	F S E	F S E	F S E
	CeramicSpeed Insulate	F E	F E	F E	F E	F E
	CeramicSpeed HighTemp	F	F	F	F	
	CeramicSpeed Corrotec	F S	F S	F S		F S
Custom	CeramicSpeed Custom Build	F S E	F S E	F S E	F S E	F S E

F These bearings can be delivered lubricated with food industry approved lubricants

S Slowly rotating bearings. Contain an increased amount of lubricant.

E These bearings can be further optimised for maximum energy efficiency.

Food and Beverage Industry



LongLife Xtreme

Especially suited for contaminated areas, where foreign objects can enter the bearing and affect its performance. The hardened balls simply crush any foreign objects that enter the bearing. Combining LongLife Xtreme balls with the optimal lubricant significantly reduces any damage to the bearing races.

LongLife Insulate

The safe solution for electric motors. The natural properties of the CeramicSpeed balls gives them excellent insulating properties. CeramicSpeed LongLife Insulate bearings are guaranteed to prevent bearing damage resulting from stray electrical currents.

LongLife HighTemp

A completely unique HighTemp programme of up to 260°C and 350°C. Ceramic balls only expand by 25% of the amount of steel balls, and don't weld to the races.

LongLife Corrotec

The bearings that take over when bearings in regular corrosion-free materials give up. The combination of corrosion-free races, CeramicSpeed balls, synthetic ball cages and special lubricants form a bearing with unique properties in terms of resistance and lifetime.

LongLife CustomBuild

If you don't find a bearing that meets your requirements in our four LongLife series, then we also offer custom bearing solutions to meet your needs. Our CustomBuild series is constantly developing to meet new challenges, and we develop new, unique bearing solutions in collaboration with our customers.

04.2013 V1

Hybrid bearings for industrial use

CeramicSpeed bearings are based directly on the technology developed as part of NASA's space programme in the 1990s. Today, Silicon Nitride is used to manufacture the ceramic balls used in CeramicSpeed bearings. We offer unique solutions, using ceramic balls, and other specially developed components. These bearings outperform traditional steel bearings in every way, offering significant economic advantages in industrial applications.

4-8 times longer lifetime reduce costs

99.4 % of CeramicSpeed's bearings last at least 4 times as long as the traditional bearings they replace. In 50 % of cases they last 8-20 times longer. The increased investment in CeramicSpeed's hybrid bearing solutions is on average returned within the 1st or 2nd lifecycle of a traditional bearing. Increasing the lifetime of your bearings reduces operating costs significantly, especially in environments where traditional bearings have a short lifespan of 1 to 2 years. This is increasing your competitiveness.

Increase your competitive edge

Uptime is critical for effective production. CeramicSpeed bearing solutions set a new standard for the lifetime of your bearings. This allows you to optimise maintenance schedules – a key area in increasing uptime. Utilising longer lasting bearing solutions gives you an enormous potential to reduce down time, cut production costs, and thereby increase your competitive edge.

Simplified maintenance planning

Implementing a CeramicSpeed hybrid bearing solution allows you to systematically remove the bearings which interrupt production and limit your capacity. Regular unplanned downtime to replace worn bearings can be replaced by carefully planned maintenance programmes.

Custom Solutions

At CeramicSpeed we don't just sell bearings, but solutions that optimise your uptime, cut maintenance costs and increase your competitiveness. We do that by optimising bearings to suit their purpose. Our technicians are ready to advise you:

Phone: +45 9740 2544
Email: industry@ceramicspeed.com



Use of Ceramic-Speed bearings in the food industry

High RPM:

- Electric motors
- Ventilators
- Pumps
- Compressors
- Decanters
- Centrifuges
- Whisks and stirrers
- Checkweighers
- Saws
- Drills
- Brushes
- Meat saws/Band saws
- Pickers/Scolding chambers

Low RPM:

- Conveyer belts
- Freezers
- Conveyors
- Mincers
- Open/close functions
- Wheels on carts
- Belts and sprockets
- Forklift mast bearings

Other:

- Packing and filling machines
- Ovens
- Robots
- Robot Stations
- Ball valves
- Linear rails
- Crushers
- Rolling machines

CeramicSpeed bearings: The right choice to meet the rigorous demands of the food industry

Conditions which place extra demands on bearing solutions in the food industry:

- Effective productions lines, where uptime is crucial
- Increased automation
- Long operating hours
- Aggressive cleaning
- The need to minimise lubrication / use food industry approved lubrication
- High demands on quality and precision
- Rust-free materials

The properties of Ceramic Speed bearings provide many advantages in all of these areas.

Properties of CeramicSpeed balls compared with hardened steel balls.

	Density [g/cc]	Hardness [Vickers]	Elastic Modulus [GPa]	Thermal Expansion Coefficient (10 ⁻⁶ K) [RT to 800C]	Max Usage Temperature [°C]	Surface Finish Grade 5 [micron]	Material Fatigue, Life Wear Resistance	Electrical Resistivity [Ω-cm]
Steel Balls	7,6	700	190	12,3	320	0,02	-	10 ⁻⁸
Silicon Nitride Si ₃ N ₄	3,2	1600	310	3,7	1000	0,005	< 10x	10 ¹⁴
Difference	58% lighter	128% harder	63% stiffer	-70%	+680°C	400% smoother	< 10x	10 ¹⁶ =insulator 0=superconductor

CeramicSpeed balls are significantly harder and stiffer than hardened steel balls, meaning that they function more effectively in environments prone to contamination. They simply crush any foreign particles that enter the bearing, keeping the bearing rolling.

Ceramic balls don't corrode. This eliminates the problem of rust damage, which can occur in traditional bearings – for example when the production line stands still overnight after cleaning.

Ceramic balls are smoother than steel balls. This reduces wear on the raceways, minimising the development of play in the bearing compared to traditional steel bearings.

Ceramic balls are non-conductive. If electrical current passes through a bearing using steel balls, in an electric motor, or other equipment, the bearing can be damaged. With the insulating properties of CeramicSpeed hybrid bearings you avoid damages by electrical current.

CeramicSpeed bearings are specially suited to the food industry

- LongLife Corrotec - Corrosion-free bearings
- LongLife Xtreme - Specially designed for contaminated areas
- LongLife Xtreme Low RPM - Optimal for low resolution
- LongLife Insulate - Guarantee against electrical damage in motors