

## Success Story

Industry: Food and Beverage

Application: Snack Foods Manufacturer

**Cost Savings: € 52 203**

### Introduction

A Snack Foods Manufacturer in the UK was experiencing short service life of only 4 months from standard Deep Groove Ball Bearings, used within a 7 lane food processing conveyor system. Due to daily wash-down cycles, water ingress into the bearings caused premature failure. This resulted in costly maintenance, loss of production and damage to ancillary equipment including conveyor belts. NSK engineers reviewed the bearing application and recommended the use of Stainless Steel bearings fitted with Molded-Oil lubrication and DDU seals, which are designed to perform well in wet applications. Regular monitoring of the application showed that the bearing lifetime was extended to 12 months, which represented a significant improvement.

### Key Facts

- Food conveyor system
- Frequent wash-down cycles using aggressive cleaning fluids causing standard bearings to fail prematurely
- Total of 84 bearings used within the equipment, replaced 3 times per year - totalling 252 bearings annually
- Maintenance time of 24 hours per breakdown (2 engineers working for 12 hours)
- Loss of production: 14 hours per breakdown
- Standard bearings replaced with Stainless Steel Molded-Oil bearings increasing bearing life from 4 to 12 months



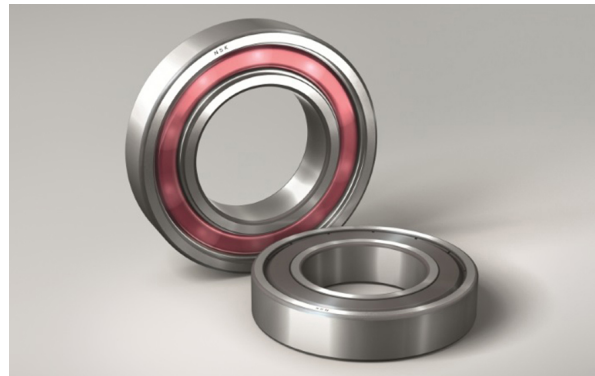
↑ Snack Foods Manufacturer

### Value Proposals

- NSK engineers performed a Failed Bearing Analysis which confirmed water ingress as the cause for premature bearing failure
- An Application Review showed that the standard sealed Deep Groove Ball Bearings were inadequate
- NSK recommended using stainless steel Molded-Oil Deep Groove Ball Bearings to extend bearing life
- The customer benefited from reduced maintenance costs and increased productivity
- Bearing replacement reduced to once per year

## Product Features

- Complete stainless steel bearing assembly ideal for corrosive environments Molded Oil
- Lubrication System provides a sealed for life bearing solution
- Grease-free property with no oil refilling keeps operating environments clean
- Operating life more than twice as long as grease lubrication, in water or dust contaminated environment
- High integrity contact-seal type
- Achieves extended maintenance-free performance as Molded-Oil provides a continuous supply of lubricant. Available for high speed applications
- Available in ball bearing, spherical roller bearing and tapered roller bearings types



↑ Molded-Oil Deep Groove Ball Bearings

## Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 Deep Groove Ball Bearings replaced 3 times per year	€ 684	Stainless Steel Molded-Oil Deep Groove BallBearings replaced once annually	€ 4.253
 Engineering costs:2 men @ 35/h each x 24 hours x 3 times per year	€ 3.218	Engineering costs:2 men @ 35/h each x 24 hours x 1 times per year	€ 1.073
 Potential lost sales profit:€1.276 per hour x 14 hours downtime x 3 times per year	€ 53.627	Potential lost sales profit:None	€ 0
<b>Total Costs</b>	<b>€ 57 529</b>		<b>€ 5 326</b>