

Success Story

Industry: Food and Beverage

Application: Mecatherm Dough Mixer

Cost Savings: € 47 987

Introduction

A major UK bakery was facing regular bearing failures on their Mecatherm Dough Mixer. Bearings needed to be replaced every 2 to 3 months resulting in high costs of maintenance and loss of production. NSK reviewed the bearing application and recommended NSKHPS Spherical Roller Bearings. This improved bearing life significantly by 3 to 4 times and therefore reduced unplanned downtime resulting in a large cost saving.

Key Facts

- 2 Mecatherm Dough Mixers in use
- Dough Mixer application requires heavy load capacity together with bearings that can also accommodate swashing caused by shaft deflection
- Original bearings only lasted between 2 & 3 months due to application conditions
- NSK Solution: NSKHPS (High Performance Standard) Spherical Roller Bearings ideal for heavy loads
- Bearing life extended by 3 to 4 times
- Reduced maintenance requirement resulted in a significant cost saving generated



↑ Dough Mixer

Value Proposals

- NSK Engineers reviewed bearing application including an analysis of the failed bearings
- Recommendation of NSKHPS Spherical Roller Bearings
- A trial of NSKHPS bearings resulted in life improvements 3 to 4 times that of before

Product Features

- Highest load rating SRB's
- Optimum raceway design & surface finishing
- Brass cage design (CAM) or strengthened steel cage (EA)
- High cleanliness Z-steel
- Temperature stability: up to 200° C
- 40 mm to 260 mm bore size
- Up to twice the operating life
- Up to 20% higher limiting speed
- Dynamic load rating: 25% higher
- Lower maintenance cost and improved productivity
- High load rating enables downsizing



↑ NSKHPS Spherical Roller Bearings

Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 Lost production: 12hrs x 600 €/hr x 8/year	€57.600	Lost production: 12hrs x 600 €/hr x 2/year	€14.400
 Labour cost: 22 €/hr x 24hrs x 8/year	€4.224	Labour cost: 22 € x 24 hrs x 4/year	€2.112
 Bearings costs	€864	Bearings costs	€432
 Engineering support	€2.243	Engineering support	€0
Total Costs	€ 64 931		€ 16 944