

Success Story

Industry: Food and Beverage

Application: Meat Slicer Machine

Cost Savings: € 30 471

Introduction

A leading producer of pork products was facing repeated bearing failures on 14 Meat Slicer Machines. The customer needed to change bearings on each machine monthly, leading to high maintenance costs and lengthy machine down time. NSK investigated this problem and identified that the bearings were damaged by ingress of water and hard contaminants which were entering the bearing due to daily machine wash down. NSK proposed a trial with NSK Molded-Oil bearings resulting in a significant lifetime extension and cost saving.

Key Facts

- Frequent bearing failures occurring every month across all 14 machines.
- Approximately 168 man hours needed to replace failed bearings annually.
- Substantial machine down time, 3 hours per bearing and shaft change per machine.
- NSK solution: Deep Groove Ball Bearings with Molded-Oil lubrication.
- Significant lifetime improvement resulting in no failures over a 4 month period on each machine.
- Productivity improvement.
- Significant annual cost saving achieved.



↑ Meat Slicer Machine

Value Proposals

- Following repeated and costly bearing failures, the customer requested a solution to the problem on their Meat Former/Classifier/Slicing Machines.
- A Failed Bearing Analysis determined that the failures were due to water and hard particle ingress resulting in lubrication breakdown/washout.
- A trial was proposed using NSK Molded-Oil Deep Groove Ball Bearings which proved to be successful. Bearing service life was extended significantly.
- Molded-Oil bearings are now being installed in all 14 machines. A reduction in machine down time and maintenance costs are expected to yield significant annual cost savings.

Product Features

- Available for high speed applications
- Available in ball bearing, spherical roller bearing and tapered roller bearings types
- Rust-proof - Stainless steel for corrosive environments
- Grease-free property with no oil refilling keeps operating environments clean
- Operating life more than twice as long as grease lubrication, in water or dustcontaminated environments
- Contact-seal type available in standard inventory for ball bearings
- Achieves extended maintenance-free performance as Molded-Oil provides a continuous supply of lubricant



↑ Molded-Oil Bearings

Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 Bearing costs	€ 11.021	Bearing costs	€ 34.478
 Lost production costs	€ 23.520	Lost production costs	€ 5.880
 Labour costs	€ 15.120	Labour costs	€ 3.528
 Ancillary components costs	€ 32.928	Ancillary components costs	€ 8.232
Total Costs	€ 82 589		€ 52 118