

Success Story

Industry: Machine Tools

Application: Collet Closer

Cost Savings: € 164 960

Introduction

A customer in the US was experiencing premature bearing failures in a collet closer application. The target was a lifetime of 15000 hrs minimum, but the bearing failed after only 100 hrs. This led to significant bearing replacements required on a weekly basis, leading to high cost and lost production.

Key Facts

- Collet closer
- Premature bearing failure
- NSK solution: a pair of Super Precision Angular Contact Ball Bearings at the front and the back side of the spindle providing the capability for supporting the high thrust loads and resulted in cooler running temperatures and longer bearing life
- Significant cost saving realised



↑ Collet Closer

Value Proposals

- NSK experts performed an Application Review
- The review showed that the used bearing was not adequate for the application
- NSK recommended to use a pair of Super Precision ACBB at the front and the back side of the spindle
- The customer benefitted from a significant increase of the bearing life and the avoidance of loss of production

Product Features

- High speed capacity for accurate operation
- 25° contact angle for good axial load capacity
- P4Y precision class running performance



↑ NSKHPS Precision Angular Contact Ball Bearings

Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 Bearing replacement cost: once per week = 52 sets	5 200 €	Bearing replacement cost	6 600 €
 Maintenance cost (to replace spindle): 60€/hr x 3 hrs x 52 weeks	9 360 €		
 Downtime cost: 1000€/hr x 3 hrs x 52 weeks	156 000 €		
 Engineering support	1 000 €		
Total Costs	€ 171 560		€ 6 600