

Success Story

Industry: Power Transmission

Application: Gearboxes for Elevators

Cost Savings: € 103 750

Introduction

An international manufacturer of elevator gearboxes was experiencing irregular and unscheduled stoppages of its product during operation. NSK investigated the problem and found out that there was a complex and difficult to assemble bearing arrangement resulting in inconsistent performance. NSK implemented through its machine design consultancy service a much simpler solution featuring a fully integrated bearing assembly unit. This two-row flanged bearing unit reduced the number of components, was easier to assemble, gave superior performance and had the benefit of supplier rationalisation.

Key Facts

- Gearbox manufacturer
- Gearboxes for elevators
- Irregular and unscheduled stoppages
- Failures through complex and often incorrect assembly of bearings and components
- Demand for greater performance and extended service life
- Trials with NSK flanged bearing units
- Approval of solution after successful trial
- Result: reduction of assembly costs and staff deployment



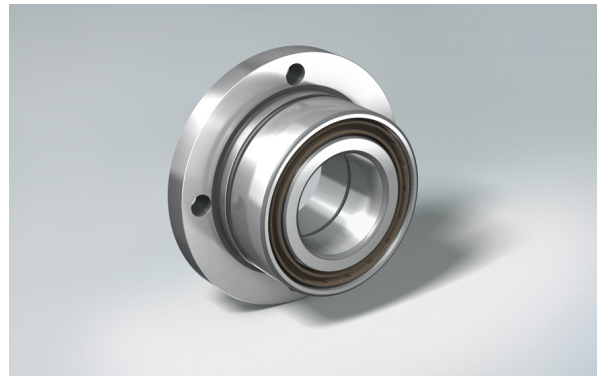
↑ Elevator gearbox

Value Proposals

- NSK's investigation showed that problems arose during installation of the bearings
- NSK training of employees in the installation and removal of bearings
- Machine design consultancy proposed NSK integrated flanged bearing unit
- Reduction of assembly costs and staff deployment
- Great improvement in the bearing performance and reliability
- Cost savings of approx. €103.750 per annum

Product Features

- 40° contact angle for high axial forces
- Compact design
- Specially developed seal material for gear oil
- Negative operating clearance
- Lifetime lubrication
- Housing sealed by O-Ring



↑ NSK flanged bearing unit

Cost Saving Breakdown

Before	Cost p.a.	NSK Solution	Cost p.a.
 Bearing costs (incl. parts)	€169.000	Costs of flanged bearings	€227.500
 Assembly costs (approx. 466h x 35€/h)	€16.333	Assembly costs (approx. 116h x 35€/h)	€4.083
 Personnel required to replace bearings	€150.000	Personnel required to replace bearings	€0
Total Costs	€ 335 333		€ 231 583