



NSK

SUCCESS STORY : FOOD AND BEVERAGE

ASSET IMPROVEMENT PROGRAM

COST SAVINGS : \$ 429,120

Application : Band Cutter

Solution : NSK NS Linear Guide with K1™ Lubrication Unit

INTRODUCTION

A major food and beverage manufacturer was experiencing frequent failures in their band cutter. A competitor's linear guides were not able to withstand the plant's need for frequent wash downs or the plant's desire to increase production speeds to increase output. NSK recommended the NS series linear guide with stainless steel material, compatible food grade grease and FDA K1 lubrication units.

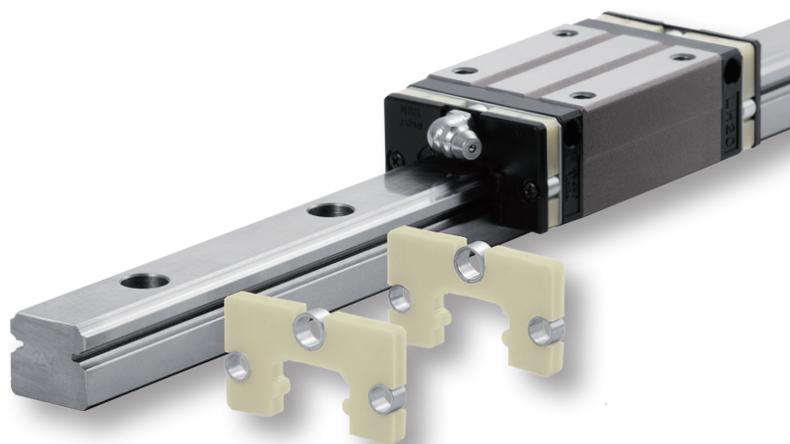
THE KEY FACTS

- › Application: Band cutter (Country: USA)
- › End-product: food and beverage
- › Number of machines: 5
- › Problem: frequent failure of linear guides
- › Objective: increase reliability and machine speed to increase production

Pictured: NSK NS Series Linear Guide + K1™

VALUE PROPOSALS

- › NSK reviewed the application and recommended NS series linear guide with stainless steel material, compatible food grade grease and FDA K1 lubrication units.
- › The NS series offered high speed capabilities to meet their desire for increased output while the K1 lubrication unit addressed the wash down and potential contamination by acting as both a seal for the carriage and a continuous lubricant even after wash down.
- › These new linear guides increased the replacement interval from 3 weeks to 32 weeks, reduced unplanned downtime and increased production speed by 20% resulting in an overall 5% increase in production.



PRODUCT FEATURES - NS SERIES

NS series linear guides offer maximum precision combined with extremely high load ratings. Outstanding accuracy means that the object in motion is positioned precisely and moves optimally. It also guarantees smooth, even running.

- › High-speed design is standard
- › High level of precision in different classes
- › Self-aligning feature accommodates misalignment and minimizes internal loads
- › Optional extras:
 - K1 long-term lubrication unit
 - High-temperature design
- › Quiet running
- › Various preload categories

PRODUCT FEATURES - K1 LUBRICATION UNIT

Linear motion made maintenance-free with K1™ Lubrication Units. These patented units provide long-term maintenance-free operation especially in environments where grease replenishment is undesirable or where grease is easily washed away. Fresh, continuous oil flows onto the rail or shaft during operation.

- › Long-term, maintenance-free operation
- › FDA approved option available
- › Available on standard NSK linear guides, ball screws, Monocarrier actuators and Robot Modules
- › Up to 10,000 km without maintenance

COST SAVINGS BREAKDOWN

	BEFORE	COST	NSK SOLUTION	COST
› Replacement Cost	\$1,000 x 5 machines x replacement interval of 17.333 (every 3 weeks)	\$86,665	\$1,800 x 5 machines x replacement interval of 1.625 (every 32 weeks)	\$14,625
› Downtime Cost	4 hours @\$500/hr x replacement interval of 17.333 x 5 machines	\$173,330	4 hours @\$500/hr x replacement interval of 1.625 x 5 machines	\$16,250
› Increased Production	\$500/hr production time x 400 hours	\$200,000		\$0
	Total	\$459,985	Total	\$30,875
			Total Cost Saving	\$429,120



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