



# SKF Integrated Maintenance Solutions for food and beverage manufacturing

## Benefits

- Improvement of line efficiency
- Greater asset availability
- Enhanced productivity
- Reduced maintenance costs
- Optimized foreign body prevention
- Increased operator safety
- Reduced total cost of ownership

## Typical applications

- Food and beverage manufacturing operations

## A partnership for increased productivity, profitability and machine reliability

Food and beverage producers face a dual challenge: consumer price pressure and the profitability-eroding effects of an extreme operating environment. For example, very high temperatures in ovens, and extremely low temperatures in freezers – combined with the heavy use of detergents, water and energy – stress plant equipment, create safety and contamination issues, and impact reliability.

The SKF Integrated Maintenance Solution (IMS) turns these obstacles into opportunities. Through an IMS partnership, SKF assumes responsibility for creating and implementing a long-term asset management and machine reliability strategy for your operation. The ultimate goals are to increase reliability, safety and profitability.

A flexible programme custom-designed for each operation's needs, an SKF IMS draws on SKF's expertise to offer outstanding solutions in critical areas, including:

**Maintenance strategy development** to better align maintenance activities with plant targets. Includes plant assessment, identification of improvement areas and establishment of key performance indicators.

**Enhanced line efficiency** by using the SKF Proactive Reliability Maintenance programme, which incorporates condition monitoring techniques and methods to identify and correct the root cause of asset failures.



*Careful strategic planning is a critical part of an SKF IMS agreement*

**Energy, water and contamination reduction** using technology upgrades and equipment redesign.

**Downtime reduction** through the use of appropriate tools and procedures during machine maintenance operations.

**Supply analysis** to review spare parts supply, enhance purchasing efficiency and reduce inventory costs.

**Training** to better align employee knowledge and skills with asset complexity.



## Increase the return on your maintenance investment with SKF

The whole idea behind the SKF 360° Solution programme is to help you get more out of your plant machinery. Whether your goals include lowering maintenance costs, raising productivity, or improving safety, hygiene and sustainability, SKF can assist. Following is an example of the SKF 360° Solution programme at work in the food and beverage industries.

### Milk producer achieves significant gains in efficiency, reductions in waste and costs

A multi-site milk producer was looking for ways to maximize productivity and minimize costs in plant operations. Typical challenges related to the milk production process made the task unusually difficult. To achieve extreme hygiene requirements, frequent cleaning was needed, resulting in high humidity levels, which in turn presented a risk of bacterial contamination. Humidity also caused the ingress of moisture into equipment, leading to bearing failure, unplanned downtime and the unavailability of assets. In addition, seals and lubricants were affected by dried milk, a highly aggressive agent which can cause wear on the seals, leading to a need for frequent re-lubrication, and costs for

disposal. The company was performing planned and reactive maintenance, but still facing an unacceptable level of unplanned stops. To address the problems, the company was committing significant time and budget resources to multiple suppliers for bearings, seals, lubricants and condition monitoring services.

An SKF Integrated Maintenance Solution agreement offered a single-source solution. Through it, SKF provided comprehensive Proactive Reliability Maintenance services; bearing, seal and lubricant supply; vibration and oil analysis; and root-cause failure analysis. In addition, improvements in application design were achieved by using SKF technology upgrades. This helped the customer to reduce bearing and seal consumption and also enabled increased asset availability, and compliance with safety and hygiene requirements. To help ensure sustained improvement, SKF

performed more than 180 hours of staff training.

As a result of these successes, the company extended the SKF IMS agreement to all of its other production units.



*The milk producer extended its IMS agreement to other production units after asset availability, safety and hygiene requirements were significantly improved*

### Summary\*

- Line efficiency:** 300 % increase in Mean Time Between Failures in critical bearing applications  
70 % reduction in assets in alert  
100 % elimination of unplanned downtime in rotating equipment for dry milk process
- Waste:** 18 % decrease in oil consumption
- Costs:** 100 % elimination of administrative costs for bearing, seal and lubricant purchasing  
27 % reduction in bearings and seals inventory  
30 % reduction in bearings and seals consumption over six months, for one plant alone

\* All numbers are rounded off and based on customer estimates. Your particular cost savings may vary.

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