



SKF condition monitoring solutions for food and beverage processing

Benefits

- **Improved line efficiency** by eliminating unplanned stops of critical machinery
- **Increased asset reliability** by continuously monitoring machines with rapid problem-to-failure development time
- **Enhanced accuracy of data**, problem diagnosis and projections of machine condition evolution
- **Improved operator safety** by eliminating the need to access inner parts of complex machines
- **Supports predictive** maintenance strategies

Typical applications

- **Filling, capping and rinsing stations**
- **Blowing machines**
- **Homogenizers, centrifuges**
- **Internal gearbox of freezers**
- **Compressors**
- **Other difficult to reach assets including driving units in intelligent warehouses**



Easy to fit SKF sensors provide operator safety by eliminating the need to access inner parts of complex machines

Increase machine reliability by obtaining condition data without putting operator safety at risk

Enhancing line efficiency and reducing downtime is an ongoing challenge in food and beverage processing. While many operators attempt to prevent stoppages by monitoring machine conditions, traditional data collection methods are often unreliable or inaccurate. This is especially the case where machines are complex and difficult to access.

In order to get condition data from difficult to access points, traditional condition monitoring methods involve stopping the machine, installing data collection sensors, and restarting the machine. But, cables and sensors do not always fit correctly. Problems can also be created when sensors using magnetic fittings are positioned on stainless steel or other non-magnetic surfaces, resulting in poor traceability of collected data. In addition, gaining access to internal machine points increases the risk of operator entrapment and injury.

SKF offers a solution with the Fixed Sensor System, available in designs which perform in a range of special environments including submerged applications, high temperature, high vibration and harsh environmental conditions. The system, which consists of fixed sensors, cabling and a BNC connecting box, enables continuous condition monitoring without the need to stop



SKF CoMo solutions minimize unexpected failures due to early detection of abnormal machine conditions

machines, install components, and restart operations. This flexible solution offers many options for customization. It can be upgraded to an automatic continuous monitoring, or protection, system for critical machines with short problem-to-failure development time. In addition, it can be configured as a wireless system for spaces where cabling is complex or impossible, or for environments with strict hygiene requirements.

SKF also offers additional Predictive Maintenance Services for data collection, management and analysis, and condition-based maintenance programs and training.



Increase the return on your maintenance investment with SKF

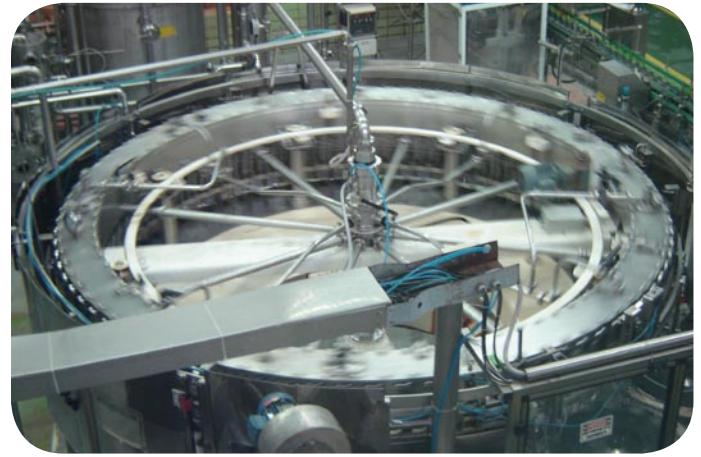
The whole idea behind the SKF 360° Solution programme is to help you get more out of your plant machinery. Whether your goals include lowering maintenance costs, raising productivity, or improving safety, hygiene and sustainability, SKF can assist. Following is an example of the SKF 360° Solution programme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

Soft drink producer eliminates unexpected failures with SKF fixed sensor system

A soft drink producer was experiencing unexpected failures in filling and capping stations due to breakdowns of driving components in machine areas that were difficult to access. These breakdowns often caused a stoppage of the entire bottling and capping line. The processing environment was one where high humidity levels and frequent chemical cleaning caused rapid deterioration of seals and poor lubricant performance. Because the bearings and gears experienced a rapid problem to failure evolution, regular inspection of machine conditions was not effective in preventing problems. While it was acknowledged that condition monitoring and predictive maintenance were needed, the restricted

access to some areas of the machine created concerns about worker safety.

SKF recommended the installation of fixed CMMS 2200 sensors in points over the driving unit, gearboxes and pinions. Cabling was installed and connected to BNC boxes where condition data was continuously collected while the machine was running. The operator was then able to view accurate data on machine conditions, and implement effective predictive maintenance strategies. The result was an elimination of unexpected failures, greater machine reliability and enhanced productivity.



Accurate data on machine conditions with help of the SKF fixed sensor system provided the means to implement effective predictive maintenance strategies

Summary

Through the SKF solution, the soft drink producer achieved:

- 100% reduction in unplanned stops of critical machines
- Improved line efficiency and productivity
- Reliable data for machine condition and predictive maintenance strategies
- Enhanced operator safety

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