



Customer Success Story

We pioneer motion

Fine fruits reliably monitored

How pallet lifters remain in continuous operation

At the Zentis plant in Aachen, Germany, the pallet lifters move tens of tons of fruity raw materials from A to B every day to make spreads or other fruit products. The gear motors and the bearings of the cable drums of the pallet lifters are subjected to heavy loads in the process. To avoid unplanned downtime, the company uses SmartChecks to monitor the pallet lifters. This way, the maintenance team can react to incipient damage at an early stage and plan accordingly.

Customer benefits

- Early alerting in case of parameter increase
- Undisturbed operation of all production lines
- Plannable maintenance work
- More safety and transparency
- Integration into the customer's own control system for peace of mind
- Remote service as well as competent personal contact for all matters



Customer

Zentis GmbH & Co. KG,
Germany

Sector

Food industry

Application

Pallet lifter

Solution

Condition Monitoring

What drives our customer ...



Zentis, Aachen

Challenge

The pallet lifter is of central importance in the production process. Its failure causes enormous costs. Zentis was therefore looking for a way to obtain information about possible damage to the gear motor and the bearings of the cable drum of the pallet lifter at an early stage by means of vibration measurement. A particular challenge was the short measurement interval - constant measurement conditions are only given during the ascent and descent duration of six seconds.



Technical information – Pallet lifter

Nominal load pallet lifter	1500 kg
Capacity per day	600 paletts
Lifting speed	1.6 m/sec.

What Schaeffler has to offer ...

Solution

In order to monitor the pallet lifter at one of its two sites in Aachen, three SmartChecks were installed on the machine.

The monitoring concept is based on reliable alarm triggering in the event of parameter increase. The SmartCheck alarm outputs were connected to the SmartConnect Box and forwarded to the customer control system.

The SmartConnect Box acts as a distributor for power supply and additional signals. It also considerably reduces the cabling work required. The complete engineering was monitored by Schaeffler experts on site.

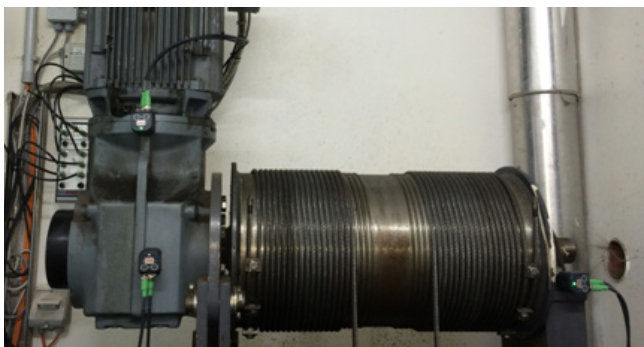
What's special

SmartCheck alarms safely and reliably despite process-related interference signals caused during ascent and descent processes. Even with very short measuring times, it delivers stable and reliable results. The solution implemented here does not require any expert knowledge on the part of the customer and can be transferred to other industrial machines in the food industry.

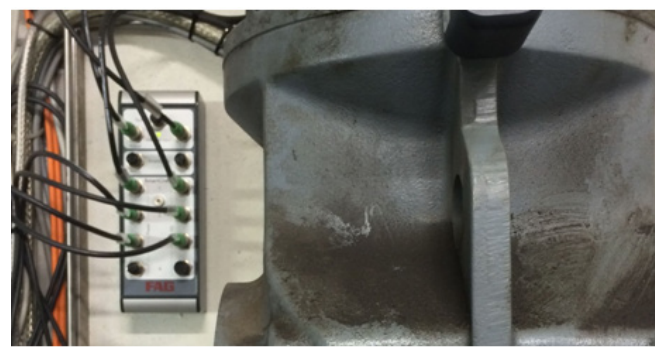


Technical information on SmartCheck

Monitoring system	Schaeffler SmartChecks
Data exchange	via OPC/UA
Monitored aggregates	Various rolling bearings, tothing in the gearbox
Monitored operating parameters	Vibration, imbalance, temperature, speed
Status display	Connection to customer's own control system
Accessories	SmartConnect Box as distributor for power supply and additional signals



Three SmartChecks ensure reliable alarming at the pallet lifter (here still in the old FAG design)



The SmartConnect Box distributes voltage and additional signals to up to four SmartChecks (here still in the old FAG design)

What our customer saves ...

Failure volume of production line in percent

After 4 hours	60 %
After 6 hours	90 %

Predictive maintenance optimizes production efficiency. The monitoring package enables an advance warning time of several weeks. Such early and reliable alerting enables Zentis' in-house maintenance team to carry out necessary repairs as part of planned maintenance work. Expensive unplanned downtime is avoided.

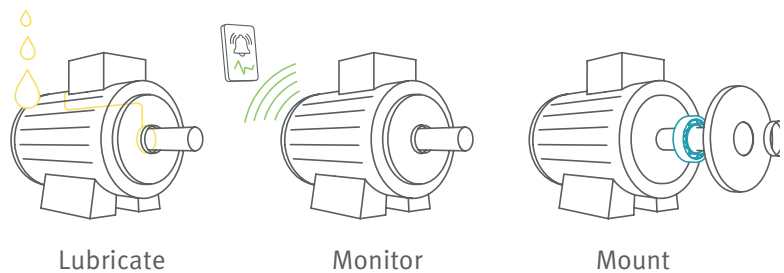
In the event of a pallet lifter failure, the first production losses occur after approximately two hours. Longer downtimes of the high rack warehouse have considerable consequences for all production lines.



With SmartCheck and its software, you always have an eye on the machines

SmartCheck is part of the Schaeffler Lifetime Solutions portfolio, which offers a comprehensive range of products, services and solutions for industrial maintenance. It is designed to support maintenance personnel over the entire lifetime of a machine.

www.schaeffler.de/en/lifetime-solutions



Why Schaeffler?

- Technical know-how
- Friendly customer service
- Quick and easy installation

Why this specific solution?

- Precise data
- Easy use
- More knowledge

Customer

Zentis has been refining fruits and other natural raw materials for over 125 years. Founded in Aachen in 1893, the company is still family-owned. Zentis is one of the leading fruit processing companies in Europe and an indispensable partner and source of inspiration for the processing industry and the trade. Zentis stands for first-class products, an uncompromising quality policy and the passion to always make the best out of fruit.

The Aachen-based company has been climate-neutral since 2021.

