

Added value through digitalization



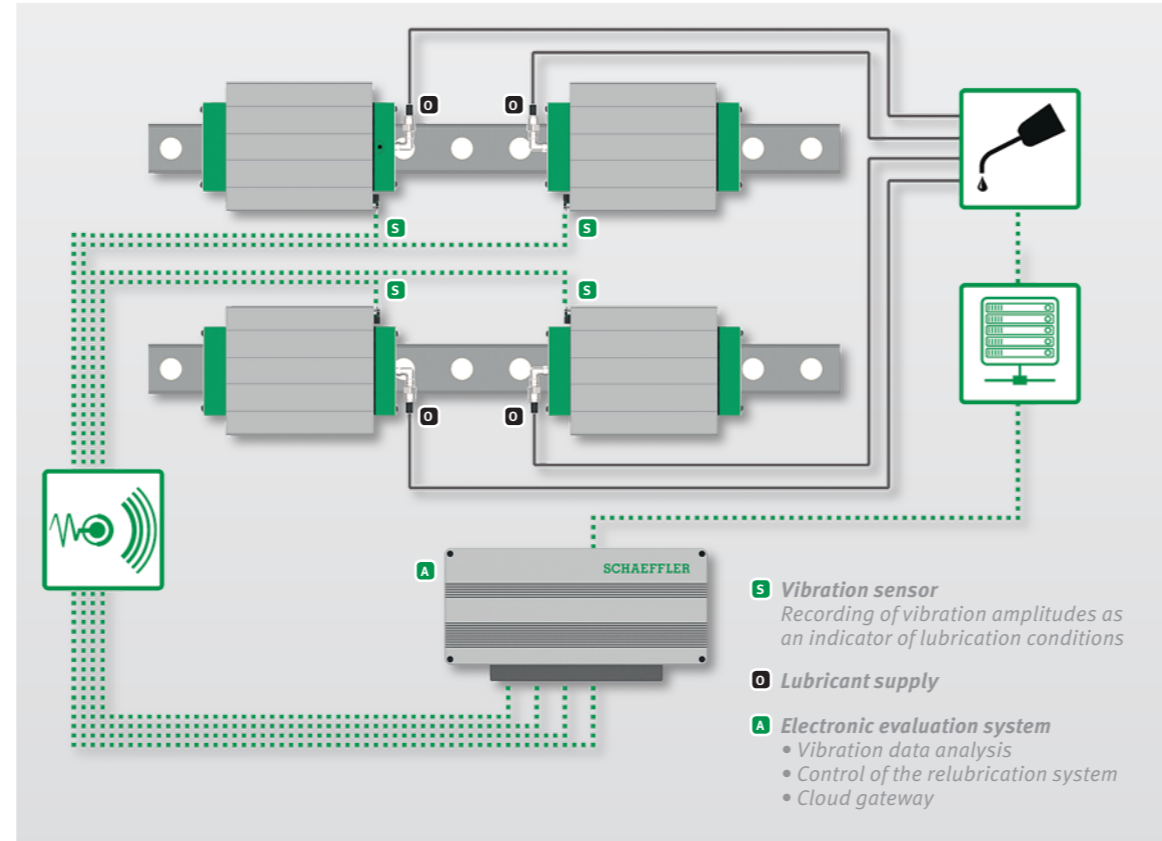
The digital revolution and the linking of components and systems increases the efficiency of manufacturing machines and production lines.

Schaeffler is shaping the field of digital transformation with a clear vision and specific solutions.

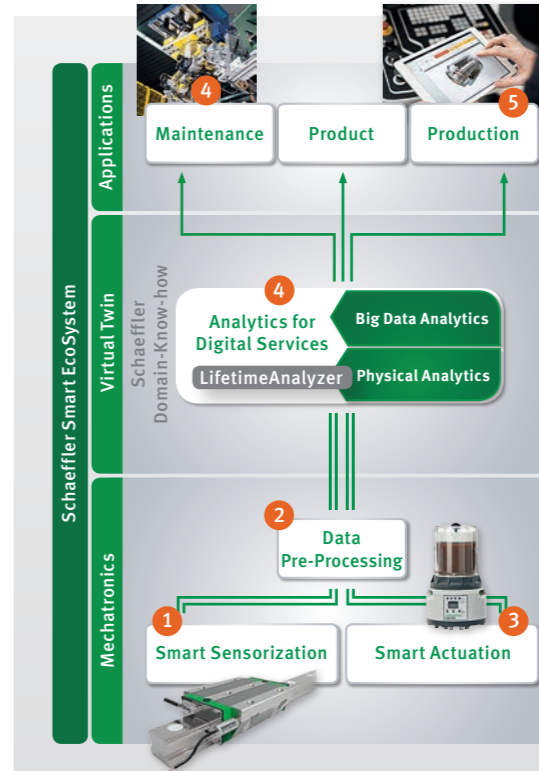
Our Smart EcoSystem offers a standardized hard and software infrastructure from components equipped with sensors through to digital services and business models:

- You can reliably and precisely gather important data for controlling processes and machine monitoring with sensors and mechatronic products such as the Schaeffler DuraSense-equipped linear recirculating roller bearing and guideway assembly.
- Use Schaeffler's unique domain expertise in the form of digital services to automatically generate relevant information from the collected data and to receive specific recommended actions.
- Benefit from our various digital solutions for industrial applications and use these solutions in a targeted manner to control processes, maximize availability, and optimize product quality.

Setup and function



Application example



Schaeffler DuraSense and the planned “Lifetime Analyzer” digital service can prevent unplanned downtimes in manufacturing facilities and production lines.

- 1 Schaeffler DuraSense makes the linear guidance system's lubrication conditions transparent.
- 2 The data are analyzed in the electronic evaluation system.
- 3 The linear guidance systems are automatically relubricated if required. This means that they are monitored and unplanned downtimes are prevented.
- 4 If all of the guide carriages' lubricating conditions are stored in the cloud, the “LifetimeAnalyzer” digital service can be used to calculate the remaining useful life of the linear guidance systems.
- 5 This means that unplanned downtimes can be prevented, making planned and requirement-based maintenance possible.

Schaeffler DuraSense

Linear recirculating ball bearing and guideway assemblies with Schaeffler DuraSense regulate their own lubricant requirements. A sensor on the guide carriage transmits the data to the electronic evaluation system, which records the current lubrication conditions and initiates automatic relubrication if required. The quantity of lubricant is adjusted depending on the load and contamination.

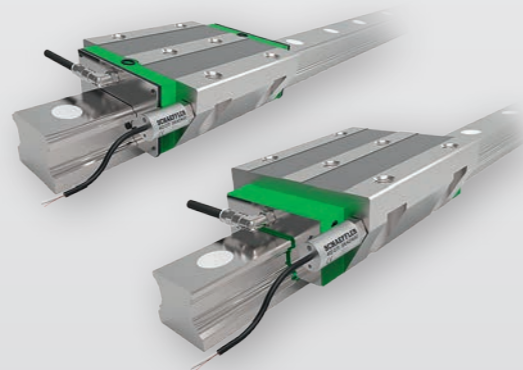
Unplanned downtimes caused by insufficient lubrication can thus be reliably prevented. Machine service life is increased and a constantly high level of manufacturing quality is ensured.

The advantages at a glance

- Optimum lubricating conditions in the linear guidance system
- Increased operating life
- Constantly high level of availability
- Lubricant requirement reduced by up to 30%
- Reduced number of facility downtimes
- Prediction of remaining useful life allows requirement-based maintenance

In the future, the “LifetimeAnalyzer” digital service will allow the linear guidance system’s remaining useful life to be calculated using the gathered data and maintenance schedules to be optimally planned.

You can use the real-time information to increase your machines’ availability, productivity, and quality.



KUSE six-row linear recirculating ball bearing and guideway assembly (left) and KUVF four-row linear recirculating ball bearing and guideway assembly

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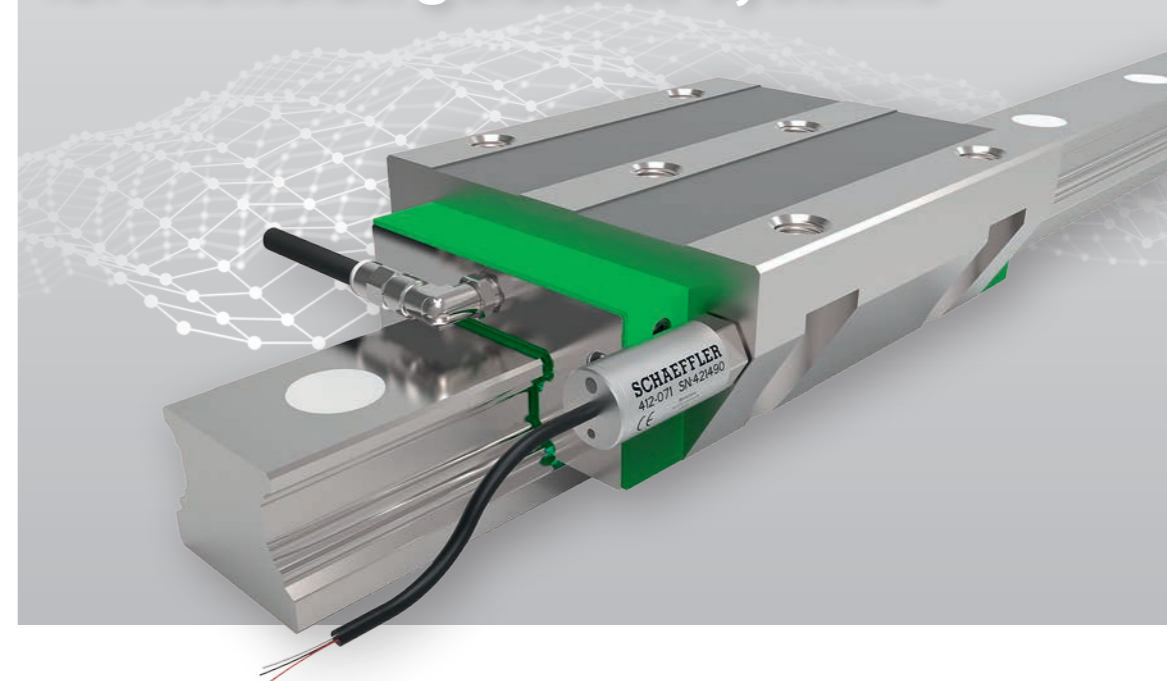
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Rolling bearings
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DURASENSE

for monorail guidance systems



SCHAEFFLER