

## Digitalisation

With our Total Productive Management (TPM) solutions you create an optimal basis for highly efficient maintenance processes.

## Digital solutions for tomorrow's maintenance management

**KLÜBER**  
LUBRICATION

### Better overview, lower costs

Keeping an eye on all lubrication points, scheduling timely maintenance, and detecting wear at an early stage: plant managers and maintenance technicians need to keep their machinery in good working order. The aim is to achieve high machine availability with a minimum of personnel and low costs, along with the least possible downtime.

Klüber Lubrication supports its customers with digital solutions for **Total Productive Management (TPM)**. With these services, you can continually analyse the condition of your machinery, and you have an overview of the associated lubrication tasks and dates in a central location. The solution evaluates real-time sensor data as well as laboratory analyses of lubricant samples and historical data. This gives you an optimal basis for highly efficient maintenance processes.

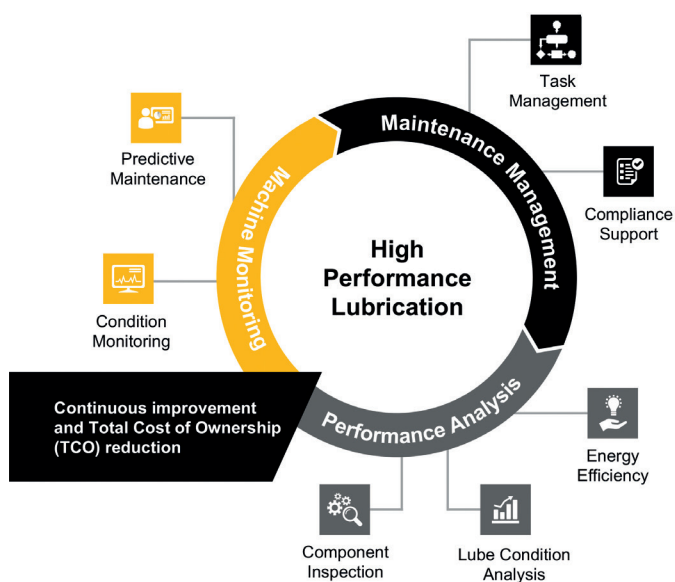
### All data in the same place: EfficiencyManager

In the **EfficiencyManager**, the information on all maintenance-related equipment is documented and represented in a straightforward way. The service platform bundles details on upcoming maintenance tasks, completed measures and processes. The integrated Compliance Support enables optimal audit processing.

### Your benefits with Klüber Lubrication Total Productive Management (TPM)

- **Individual solutions for your applications:** Together with you, our experts develop the matching applications for your digital future.
- **Predictive Maintenance:** Based on real-time sensor data and tribological analyses, stored, interpreted and visualised in one place.
- **Continuous cost optimisation:** Lower maintenance costs, less unexpected downtime and constant improvement in your efficiency and reduction of your operating costs (Total Cost of Ownership).

## Total Productive Management (TPM): Our digital services around the lube point



### Maintenance Management

- Transparency on all assets, machinery and related tasks
- Increased efficiency by standardized process
- Effective compliance handling due to audit support
- Efficient knowledge transfer among plant personnel



### Performance Analysis

- Transparency on machine and lube status based on onsite inspections and lab analysis of collected lube samples
- Trend visualization through historical data
- Recommendations for actions if needed by experts



### Machine Monitoring

- Transparency on lube status based on inline sensors
- Real-time notifications and recommendations for actions
- Prediction of incidents
- Reduction of unexpected downtime

## Central services of Klüber Lubrication Total Productive Management (TPM)

### Maintenance management: Keeping a grip on your processes

An overview for all systems, machines and maintenance-relevant components in your production as well as the corresponding lubrication and maintenance tasks builds the common database for maintenance personnel, plant managers and machine operators. This ensures high efficiency and standardised processes.

### Performance analysis: Lubrication to match specific requirements

You will receive information on the status of your machines and lubricants based on on-site inspections and laboratory analyses of collected lubricant samples. Trend visualisations of historical data enable the derivation of maintenance measures.

### Machine Monitoring: Basis for predictive maintenance

Inline sensors measure the condition of your machines, gear units, chains and oils. This way you maintain an overview with data, notifications and action recommendations in real time, even for machinery located elsewhere. This facilitates exactly schedulable predictive maintenance instead of maintenance at fixed intervals. Greater transparency saves you unnecessary travel, time and expenses whilst reducing downtime and unexpected repair needs.

## Become a partner of our digital vision!

In heavy industry and food production, the marine sector, oil & gas industry or robotics, the requirements on lubrication points and their maintenance are as diverse as our customers. Utilise the knowledge of our experts. We look for innovative and visionary manufacturers, OEM suppliers and users as partners for collaboration in the development of individualised digital solutions.

We combine all competences and services related to our high-performance specialty lubricants in our **Total Productive Management (TPM)**, and we are constantly developing new and innovative solutions.

**Are you looking for a digital solution for your lubricant management or do you want to be our partner? Talk with our experts about your project.**

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