

TRUCONNECT® REMOTE SERVICE

# TRUCONNECT Brake Monitoring



# Continuous knowledge of brake condition

The hoist brake is one of the most critical wearing components in a crane. In heavily-used cranes the service lifetime of brake wearing parts may end sooner than expected. Additional inspections also require crane shutdown and provide only a snapshot of the current condition of the brake.

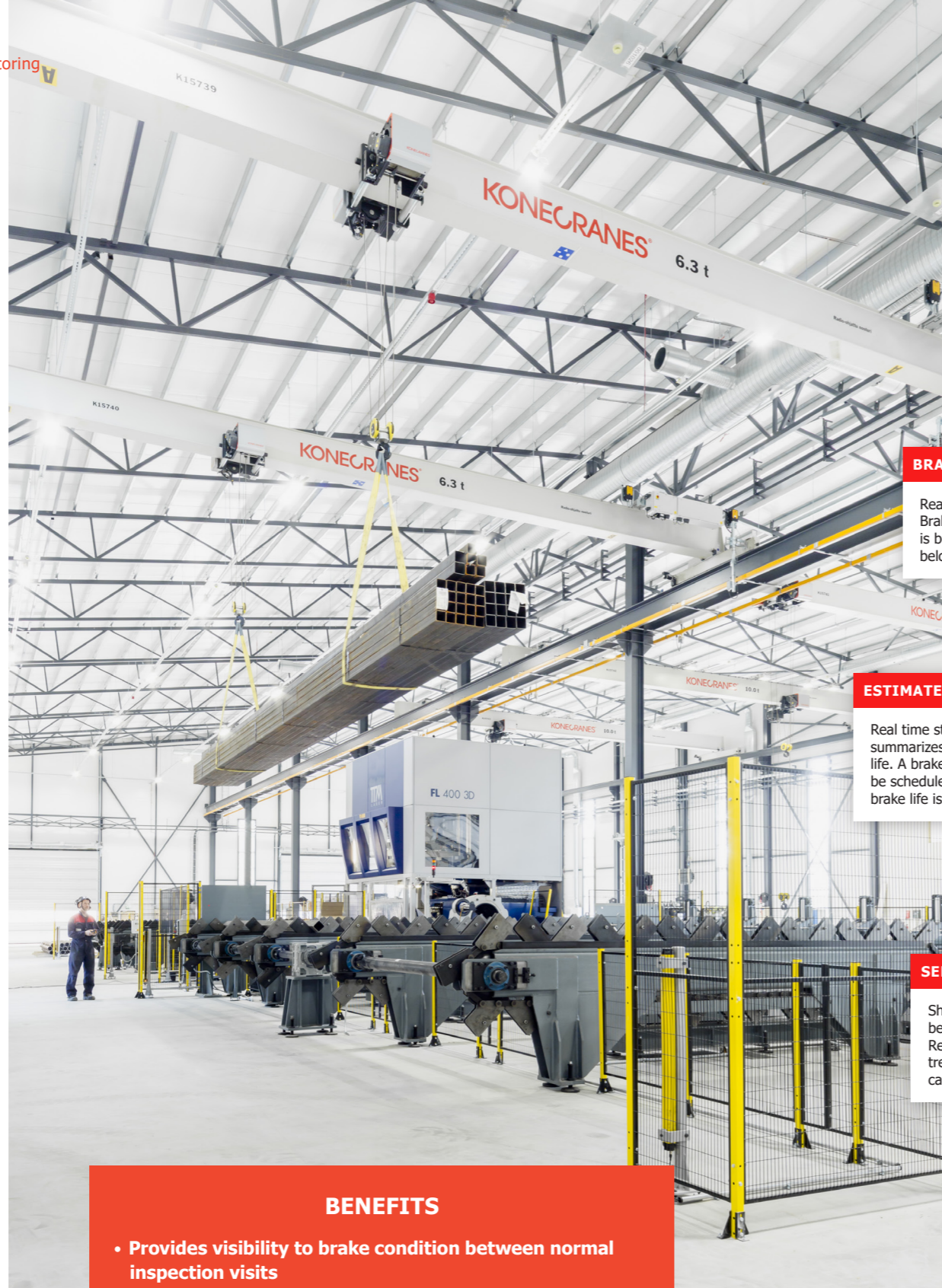
TRUCONNECT Brake Monitoring is a condition monitoring device which monitors the brake control signal and opening current. It provides visibility into current brake condition showing indirectly the status of the air gap, friction material wear and boost functionality. It also shows the combined effect of boost and air gap status on brake operation which is very difficult to detect without Brake Monitoring.

## Brake alerts by email

Brake fault alerts and data on critical conditions are continuously delivered to the yourKONECRANES customer portal and via email messages, so maintenance planning can be done in advance. Having visibility into how fast the brake is wearing and its remaining service life allows you to avoid unnecessary brake disassembly, resulting in less downtime to inspect your brake and more production time. You can benefit on safety, productivity and reliability while decelerating production shutdowns.

## A complement to Remote Monitoring

Brake Monitoring is designed to supplement TRUCONNECT Remote Monitoring – which collects condition, usage and operating data from control systems and sensors on an asset and provides alerts of certain anomalies.



### BENEFITS

- Provides visibility to brake condition between normal inspection visits
- Helps minimize the risk of load drop with the detection of brake faults
- Helps you avoid unnecessary brake disassembly for inspection
- Enables predictive brake maintenance
- Assists in further optimization of maintenance activities to reduce unplanned downtime and to improve equipment safety, productivity and lifecycle value

# Get accurate information for preventive actions

Brake Monitoring data is visible on the yourKONECRANES.com customer portal. Brake Monitoring information is used in predictive maintenance and can also be used for brake maintenance planning. Data can indicate brake maintenance needs in advance and shows if air gap adjustment is proper after installation. The data also provides a clear picture of brake overhaul intervals and replacement history, especially with unexpected brake problems.

### BRAKE AIR GAP CONDITION

Real time status indicator summarizes the brake air gap status and safety. Brakes need special attention and maintenance planning when the value is below 30% or when the value is dropping rapidly. When the value is below 15%, brake air gap and friction material must be inspected.

### ESTIMATED SERVICE LIFE

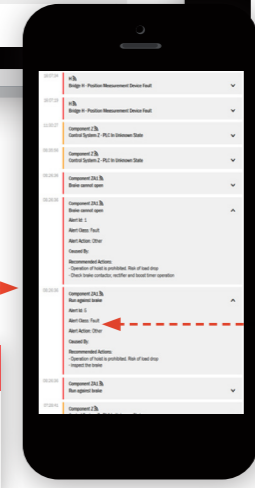
Real time status indicator summarizes brake estimated service life. A brake replacement should be scheduled when the remaining brake life is at 30% or below.

### SERVICE LIFETIME TREND

Shows when the entire brake must be changed within the safety margin. Replacements are noted and the trends in the service life of the brake can help with maintenance planning.

### FAULTS/ALERTS

Activity view shows alerts and faults with detailed descriptions and recommended maintenance actions.



**BRAKE ALERTS AND FAULTS**

### BRAKE MONITORING

**BRAKE AIR GAP**  
Shows the current status of brake air gap.

**BRAKE MAINTENANCE**  
Check when the next brake maintenance is needed.

### FAULT TYPES

- Brake cannot open (mechanical failure)
- Brake cannot open (electrical failure)
- Brake cannot close (electrical failure)
- Brake boost failure
- Brake wear failure limit exceeded

## For new cranes or as a retrofit

**PLC-controlled SMARTON**  
Brake Monitoring is delivered with new Konecranes PLC-controlled SMARTON cranes.



**CXT and S-series hoists**  
Added as a retrofit to CXT and selected S-series hoists brakes if equipped with electromagnetic disc brakes.



**UNITON and SMARTON hoists**  
It can also be added as a retrofit to UNITON and SMARTON hoists with electromagnetic disc brakes.



**Konecranes is a world-leading group of Lifting Businesses, serving a broad range of customers, including manufacturing and process industries, shipyards, ports and terminals. Konecranes provides productivity enhancing lifting solutions as well as services for lifting equipment of all makes. In 2022, Group sales totaled EUR 3.4 billion. The Group has approximately 16,500 employees in around 50 countries. Konecranes shares are listed on the Nasdaq Helsinki (symbol: KCR).**

© 2023 Konecranes. All rights reserved. 'Konecranes', 'Lifting Businesses' and  are either registered trademarks or trademarks of Konecranes.

This publication is for general informational purposes only. Konecranes reserves the right at any time, without notice, to alter or discontinue the products and/or specifications referenced herein. This publication creates no warranty on the part of Konecranes, express or implied, including but not limited to any implied warranty or merchantability or fitness for a particular purpose.



#### **Data security**

TRUCONNECT and yourKONECRANES have been awarded ISO/IEC 27001:2013 certification for information security management. The ISO/IEC 27001 certificate demonstrates a commitment to proactively manage the information security of Konecranes digital services and ensure compliance with legal and customer requirements.

#### **Learn more about TRUCONNECT Remote Service**

[konecranes.com](https://konecranes.com)