

RELY ON EXCELLENCE

Seal Monitoring Solutions

Powered by **EB Smart Seal Sensor**



Monitor



Analyze



Identify



myeagleburgmann.com

my EagleBurgmann

EagleBurgmann is developing an end to end solution. Physical. Digital.

For more than 100 years, our clients have relied on our sealing solutions to handle even their most demanding industrial applications.

Today our experience enables us to develop cutting edge seal technology, empowering you to control downtime and supporting sustainability and profitability.



Our FDA approved packings, mechanical seals, supply systems, packings and gaskets have been supporting food & beverage manufacturers all over the globe.



Pumping, transporting, processing – our seals are key components for the oil & gas industry.



We offer custom tailored products for all water applications from fresh water generation to waste water treatment and more.



Our products are successfully deployed in all chemical processes.

Advanced sealing expertise at your fingertips

Our integrated solutions are optimized for your specific industrial specifications. And with physical and digital service at your fingertips, we are always by your side. Ready to meet your challenges.

Seal sensor technologies monitor

- Temperature
- Pressure
- Vibration
- Seal face temperature
- Wear
- Leakage
- Flow speed and more



Seal competence center

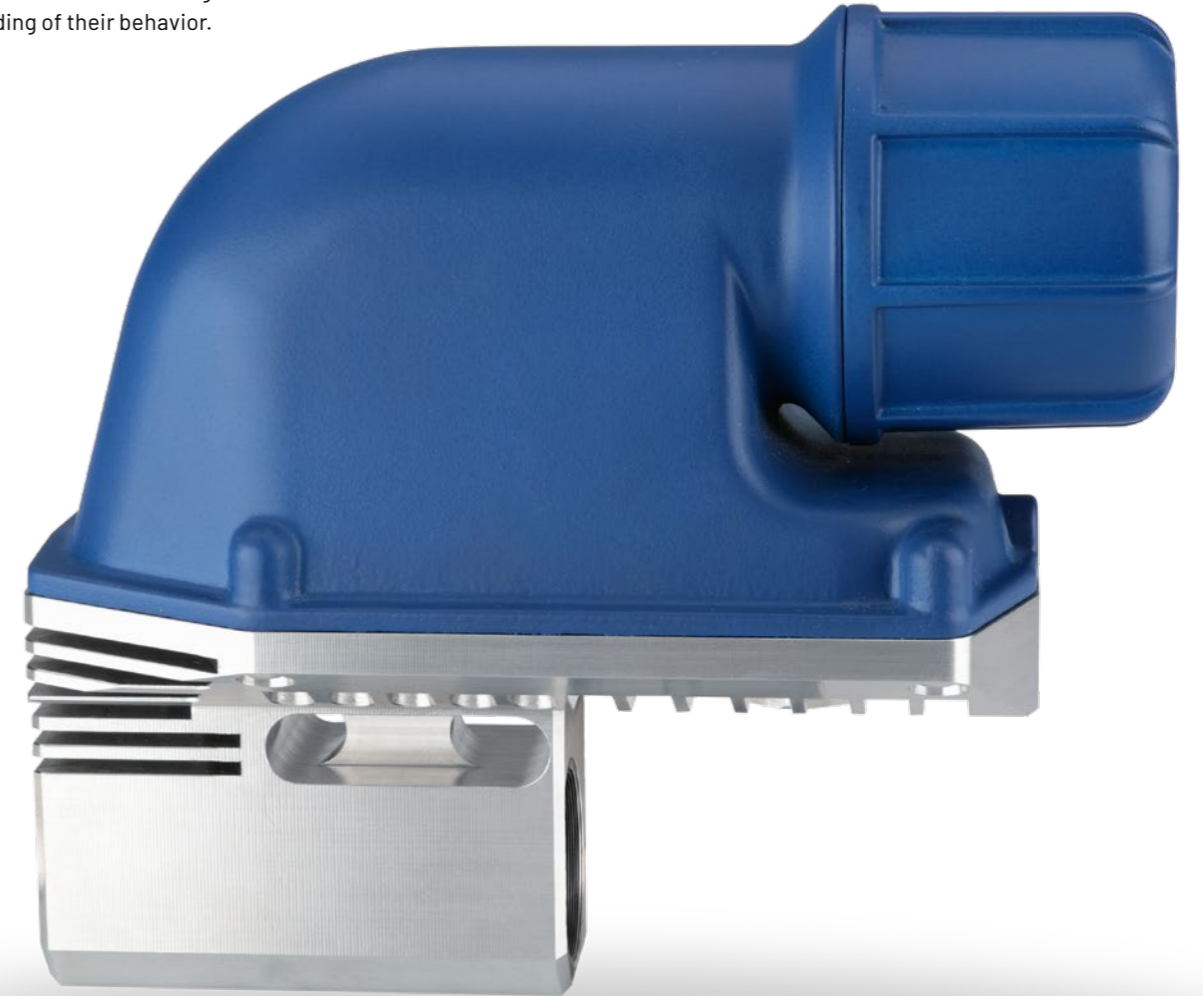
- Personal support by seal experts
- Additional support through scientific algorithms

Seal sensors inform about

- Wear detection
- Out of specification runs
- Dry run detection
- Leakage detection
- Friction loss
- Improved seal recommendations
- Further particular requirements

Your digital journey starts here.

The **EB Smart Seal Sensor** is the first part of the growing sensor portfolio of EagleBurgmann. It allows you to wirelessly monitor the operating conditions of your mechanical seal and gain a broader understanding of their behavior.



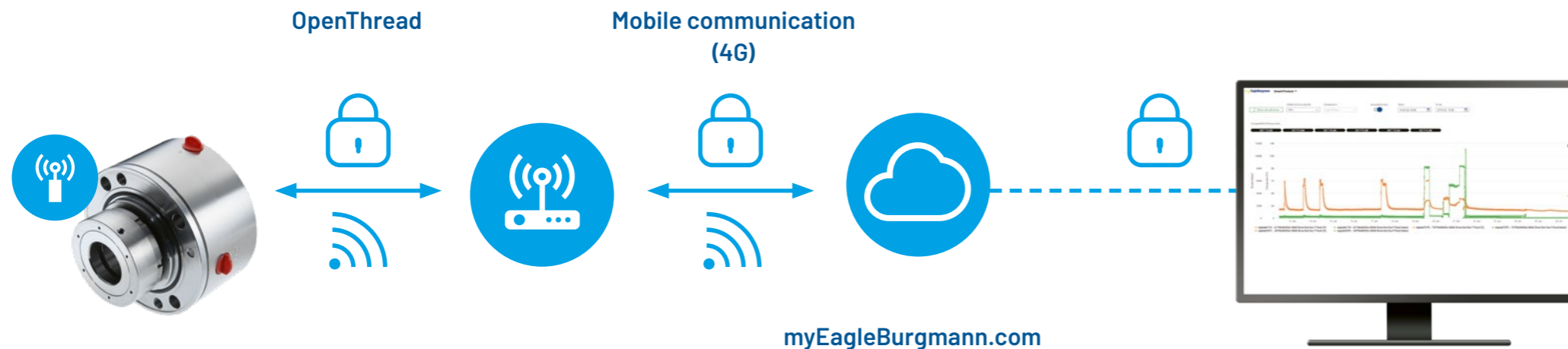
Sensor specification

- 3-in-1 measurements: Temperature, pressure, vibration (3-Axis)
- Integration into piping of supply system
- O-ring-free & stainless steel
- LxHxW [mm]: approx. 58x139x80
- LxHxW [inch]: approx. 2,28x5,47x3,015
- Wireless data transmission & battery operated (up to 3 years)
- Up to 100 sensors per solution
- Up to 100 meters/100 yards communication range to the edge/gateway

Sensor measurements

- Medium temperature: 150°C/300°F
- Medium pressure: Up to 100 bar/1450 psi
- Vibration (3-Axis): Up to 1 kHz, 6 g

Solution Architecture



1 Sensor + Seal

Up to 100 seals can be monitored with only one solution. The wireless and battery-operated sensors transmit the data to the edge using OpenThread - a highly reliable and flexible communication protocol.

2 Edge

The edge itself is a compact device consisting of a gateway that communicates with the sensors, an industrial PC that computes the data and a cellular-module that securely communicates the data to the myEagleBurgmann-Cloud. The communication range to the edge is up to 100 meters/100 yards.

3 Cloud

As for the Cloud, EagleBurgmann works with leading Cloud providers such as Microsoft Azure and SAP Cloud Platform who are amongst others compliant with the guidelines of the German Federal Cyber Security Authority.

4 EB Smart Product

Finally, the sensor data is visualized on a web-based portal that allows you to monitor, analyze and identify seal conditions using real-time and historical data. In addition, you can easily download historical data to a CSV file for further analysis in your third-party systems.



IT-Security at a glance

Sensor to the edge

AE-encrypted communication with OpenThread is a security combination that ensures that data cannot be read without the appropriate code by using encryption and authentication.

Edge computing

A specially developed and closed operating system based on Linux.

Edge to myEagleBurgmann-Cloud

MQTTS is an encrypted machine-to-machine protocol that enables the transfer of data between the edge and the cloud.

myEagleBurgmann Cloud to EB Smart Product

OAUTH 2.0 is a security protocol that allows an application to access resources without having to share its credentials.

At EagleBurgmann, we are committed to accompany you along the whole journey in deriving actionable insights out of your seal data. With our optimized sensor technology and digital platform, you gain instant access to a 24/7 web-based monitoring of your seal. In close cooperation with your technical staff, our seal experts will be analyzing the data and communicate actionable insights with you.

Solution highlights

- **Out of the box:** Sensor integration into piping of supply system and preconfigured edge
- **Compact edge:** All in one - Gateway, Industrial PC, Cellular-Module
- **Stand-alone sensors:** Wireless data transmission and battery operation
- **No network access required:** Data transmission to cloud via 4G module
- **24/7 global access:** Cloud-based solution
- **Concurrent access & collaboration:** Use multiple clients simultaneously
- **Analysis in 3rd-Party systems:** Download historical data in CSV format
- **Highly scalable:** Up to 100 sensors per solution and up to 100 meters/100 yards communication range to the edge

EagleBurgmann – at the leading edge of industrial sealing technology

Our products are used wherever safety and reliability count: in the industries of oil & gas, refineries, petrochemicals, chemicals, pharmaceuticals, food, power, water and many more. About 6,000 employees contribute their ideas, solutions and dedication every day to ensure that customers around the globe can rely on our seals. With our modular TotalSealCare Service, we emphasize our strong customer orientation and offer custom-tailored services for every need. [Rely on excellence.](#)

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