the power to control

bachmann.

CMScore: High yields, no downtime

Monitoring made easy. Predictable continuous operation.

energy.industry.maritime.

An enhancement for any existing plant

CMScore – quality data for reliable drivetrain diagnostics

CMScore rethinks condition monitoring: designed to reduce costs without compromising on Bachmann's proven quality.

CMScore focuses on data acquisition and transfer, with analysis being performed centrally. This permits high-quality diagnostics and effective comparison with multiple systems of the same type at minimum investment cost.

Quick installation:
ULTRA-COMPACT
30 x 20 x 8 cm

Easy handling:
ULTRA-LIGHTWEIGHT
~ 2,6 kg

Low costs:
ULTRA-AFFORDABLE

Compact hardware. Quick replacement. Long-term yield security.

CMScore offers operators a simple, secure and high-quality CMS solution at minimum cost. The use of Bachmann or existing IEPE sensors enables existing systems to be either replaced or upgraded. Specially designed for condition-based maintenance of the drive train, CMScore enables early damage detection, which reduces unplanned downtime and allows for predictive maintenance to minimize costs and secure profits.

- Economical & sustainable
- Pay-back period usually 1–3 years
- CMScore can often be reused in another plant

b.guard

Condition Monitoring System

Planning. Detecting. Preventing.

4 REASONS FOR CMScore

Reap long-term benefits and quickly recoup your investment

CMScore combines a fast return on investment (ROI) with sustainable yield security. Developed for operators wishing to safeguard the fruitful continued operation of their existing plants.

Reduce costs

CMScore sustainably reduces the procurement and replacement costs of CMS equipment and enables economical condition monitoring, to Bachmann's proven high quality standards.

Achieve results

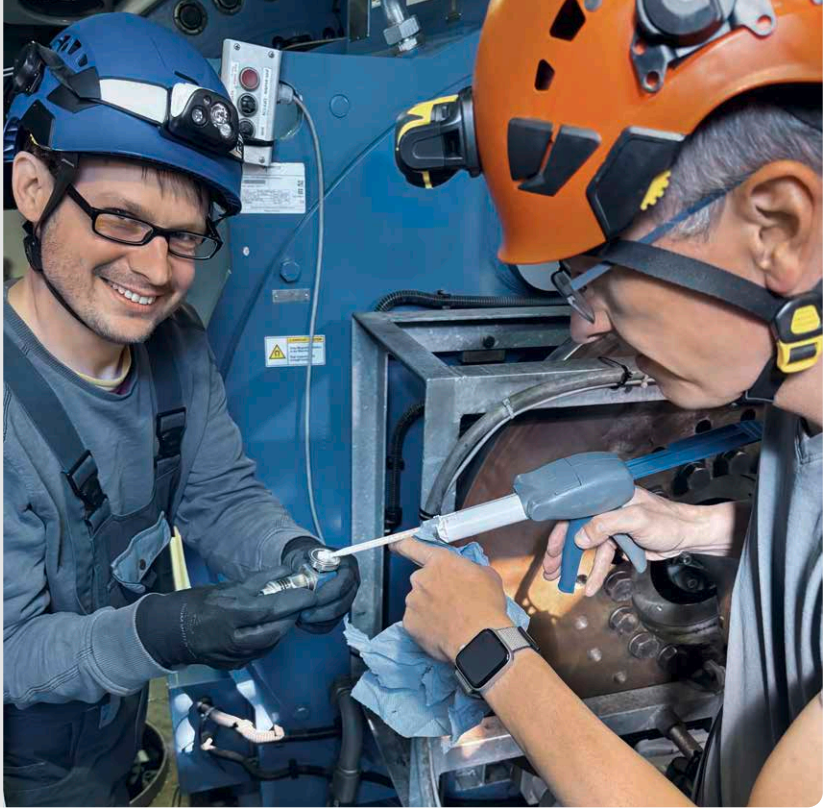
CMScore relies on reliable and robust standard accelerometers. If desired, these can be supported by existing sensor technology, thereby ensuring cost-efficient and reliable maintenance planning.

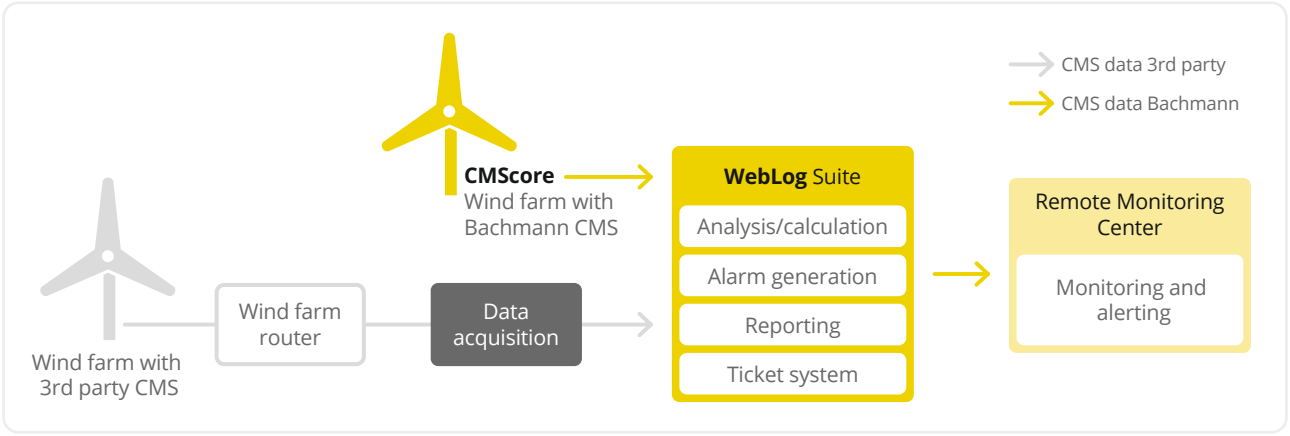
Accessible to all, yet secure

CMScore data flows into a database of measurements from thousands of wind turbines, serving as a basis for robust analyses that have been proven in the field.

»Detected in good time, damage to generator bearings can often be repaired quickly; if overlooked, however, a defect can spell the end of an older system's life. This is exactly where CMScore comes in.«

Holger Fritsch,
General Manager Bachmann Monitoring





Lightweight and simple – efficient monitoring with no additional effort

CMScore has deliberately been designed for simplicity and the avoidance of additional effort. The system collects measurement data and transmits it to the "WebLog Suite" server-based database. There, the information is processed, analysed and automatically converted into alarms and reports. Our remote monitoring team monitors the systems and provides information in the event of alarms. In most cases, this leaves sufficient time for directed repair measures to be launched and major long-term damage to be prevented.

Reliable data for sound decisions – IEPE rather than MEMS

CMScore relies on standard piezoelectric acceleration sensors (IEPE), which enable high sampling rates of up to 25.6 kHz, rather than low-cost sensors (MEMS). IEPE sensors provide precise and stable measurement data, particularly for drivetrain components with low rotation speeds. Higher signal quality and reliable diagnostics extend service life and significantly reduce unplanned downtime.

Technical specifications

- Server-based data processing using WebLog Suite
- 24 VDC power supply (power consumption < 10 W)
- 8 IEPE channels, 2 speed inputs, 2 analog inputs
- Very compact and light cabinet

Maximum diagnostic quality. Minimum costs.

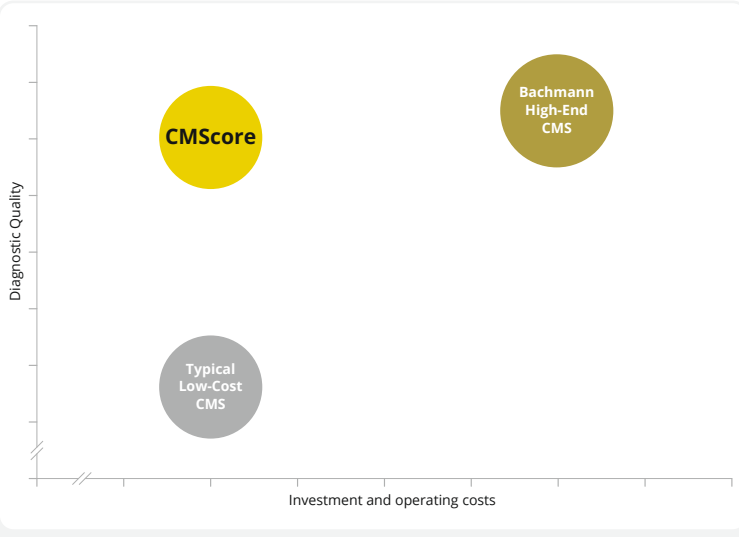
The economical condition monitoring system for sound decisions throughout the entire life cycle of your equipment.

CMScore combines low investment and operating costs with high diagnostic quality

Early and reliable detection of bearing and gear damage in the drive train is a key factor for the economical operation of wind turbines, particular older systems which have been inadequately monitored to date. The compact, robust system is ideal for replacing or retrofitting existing CMSs; the reuse of existing IEPE sensors significantly reduces the costs of acquisition, installation and replacement.

Robust IEPE sensor technology and high sampling rates provide the basis for precise diagnostics, predictable maintenance measures and reduced unplanned downtime and costs.

With the WebLog Suite, operators, service providers and asset managers benefit from a uniform analysis and reporting process, including for mixed farms. Tool changes are less frequent, alarms are unambiguous and decisions are faster. CMScore stands for cost-effectiveness, flexibility and reliability.



»CMScore occupies the economic sweet spot: reliable, high-end diagnostics with significantly reduced investment and operating costs.«

Bachmann Remote Monitoring Service – maximum security

Based on condition monitoring expertise gained from over 10,000 systems, the op-tional Remote Monitoring Service takes care of all condition monitoring – from commissioning and data analysis to precise diagnosis. DNV-certified processes, WebLog access and informative reports ensure transparency and direct alerts in the event of errors. Reliable recommen-dations for action enable informed decisions to be taken for condition-based maintenance.

For more information, visit bachmann.info

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CMScore EN | Subject to technical changes