

Customer Reference: AUMUND Group

**The perfect match for improved products & services!
Predictive Maintenance for heavy weights.**

Smart conveying – a short slogan with a big meaning. AUMUND has the ambitious goal to be in the forefront of the Industry 4.0 development to set new standards with intelligent machines and improved services for its customers in the heavy industry. Impossible? Not at all! Together with PREMAS AG, AUMUND turned its vision into reality – with PREMAS® 4.0 Predictive Maintenance Solution. This is the story of AUMUND consequently going all the way from developing until establishing a digital solution with its highs and lows – together with the dedicated team from PREMAS AG.

How it all began

Four years ago, Industry 4.0 was on everyone's lips when AUMUND was thinking about developing a Predictive Maintenance Solution. Inspired by several conversations with customers and partners, AUMUND decided to build on this trending topic. The big question was: how? With more than 22'000 machines, AUMUND has a big base of data and know-how of its machines. However, they had no experience in Industry 4.0 to realize a Predictive Maintenance Solution themselves. Therefore, AUMUND was looking for a reliable and inspiring partner. The Swiss start-up PREMAS AG matched its know-how in developing Predictive Maintenance Solutions and over 43 years of experience in the cement industry with 100 years knowledge of building

conveying equipment from AUMUND. A powerful combination which literally fit like a glove.

About AUMUND Group

The AUMUND Group of companies operates globally in various industries. It is a specialist in the field of conveying and storage equipment for a wide range of bulk materials with different characteristics. With our Predictive Maintenance Solution, PREMAS® 4.0, AUMUND expands its service portfolio to support its customers even better in the field of predictive maintenance.

aumund.com/en/premas-maintenance-solutions/premas-4-0

The AUMUND vision: intelligent machines & services

“One day, our machines will tell their needs right away to the maintenance manager who can order required spare parts with few clicks online ordering his parts just-in-time.”, raves Rainer Furthmann, Managing Director Technology at AUMUND Fördertechnik. AUMUND follows a clear vision: creating unique customer experience with high-quality products and services. An ambitious goal, as Furthmann clarifies: “This is future music and a long way to go.” However, AUMUND is consequently going its way to make this vision happen. “When the idea of Predictive Maintenance came up, we were talking to several customers whether such kind of solution has an added value for them. Many wanted to install it on the spot.”, tells Rainer Furthmann. This was the starting point for the development of the PREMAS® 4.0, a Predictive Maintenance Solution specially developed for AUMUND conveying equipment, which is now on its way to be established in the worldwide markets.

The goal: learning from data to improve products and offer unique services

Why shall a machine builder go for a Predictive Maintenance Solution? Because he can rely on data and therefore learn from facts than from assumptions. This is also the reason why AUMUND decided to go for such kind of solution: “To us, we convey quality is not only a slogan. We want to learn from data to continuously improve our products and services. Our expectation on Predictive Maintenance is, that we will detect for example unusually high wear of critical parts early to subsequently improve our machines and spare parts or even develop new solutions and services.”, states Furthmann. Besides this, Robert Morris, Head of Preventive and Predictive Maintenance Services at AUMUND, emphasizes the importance of excellent customer service: “AUMUND is often mentioned to be expensive if you only compare the pricing of the products. However, what our customers pay for is excellent customer service.



Smart conveying – AUMUND sets new standards in customer service with PREMAS® 4.0 Predictive Maintenance Solution.

This makes AUMUND unique in the market. Our aim is to make the job of our customers easier by saving time, costs and resources based on smart maintenance solutions and proactive customer service.”

Born agile. Made for the extreme. – PREMAS® 4.0 Predictive Maintenance Solution

Developing a solution for the heavy industry means developing for the extreme. Dust, dirt, and heat are the daily business of a conveying machine.

Furthermore, AUMUND is an international company with customers around the globe – often based in

rural areas in the nowhere. Accordingly, the requirements for a Predictive Maintenance Solution are high. It needs to withstand extreme conditions and work reliable around the globe in remote areas with low internet connection. But that’s just one side of the story. Data

and simplicity are key – sharing data and data safety are the main concerns of AUMUND customers. It was clear to AUMUND that data sovereignty stays with the customer. PREMAS® 4.0 needed to be IT/OT independent and provide a self-speaking dashboard with all relevant information and needs to send push notifications in case of anomaly detection. Therefore, the customer doesn’t have to always monitor the dashboard and gets informed where to act next wherever he is, whenever his action is required.

“To us, we convey quality is not only a slogan. We want to learn from data to continuously improve our products and services.”

Rainer Furthmann, Managing Director Technology

Consequently, a tailor-made solution considering all these aspects was a must according to Rainer Furthmann: “There are hundreds of partners in the field of Industry 4.0 offering solutions. We could have clearly gone to other market players. But we would never have been able to develop such a specific solution, tailored to us and our customers, as it was possible with PREMAS AG.” Specially to find a globally working solution turned out as a crucial challenge: “Most solutions we compared were working in a specific country but not worldwide. With PREMAS AG, we were able to develop a unique solution working all over the globe fulfilling the required country-specific certifications.”, says Rainer Furthmann.

In an agile development procedure, PREMAS® 4.0 was born. From prototyping to testing and serial production and implementation to the AUMUND organization and market, PREMAS AG acted as independent sparring partner, working side-by-side with involved AUMUND employees all over the world.

“What differs from competitors and for what customers pay for is excellent customer service. With PREMAS® 4.0, we want to make the job of our customers easier by saving time, costs and resources.”

Robert Morris, Head of Preventive & Predictive Maintenance Services

“Like this, you don’t get stuck in the second or third best solution.”, emphasizes Furthmann. The result? A trusted partnership and an authentic, honest collaboration. “There was a constant exchange of

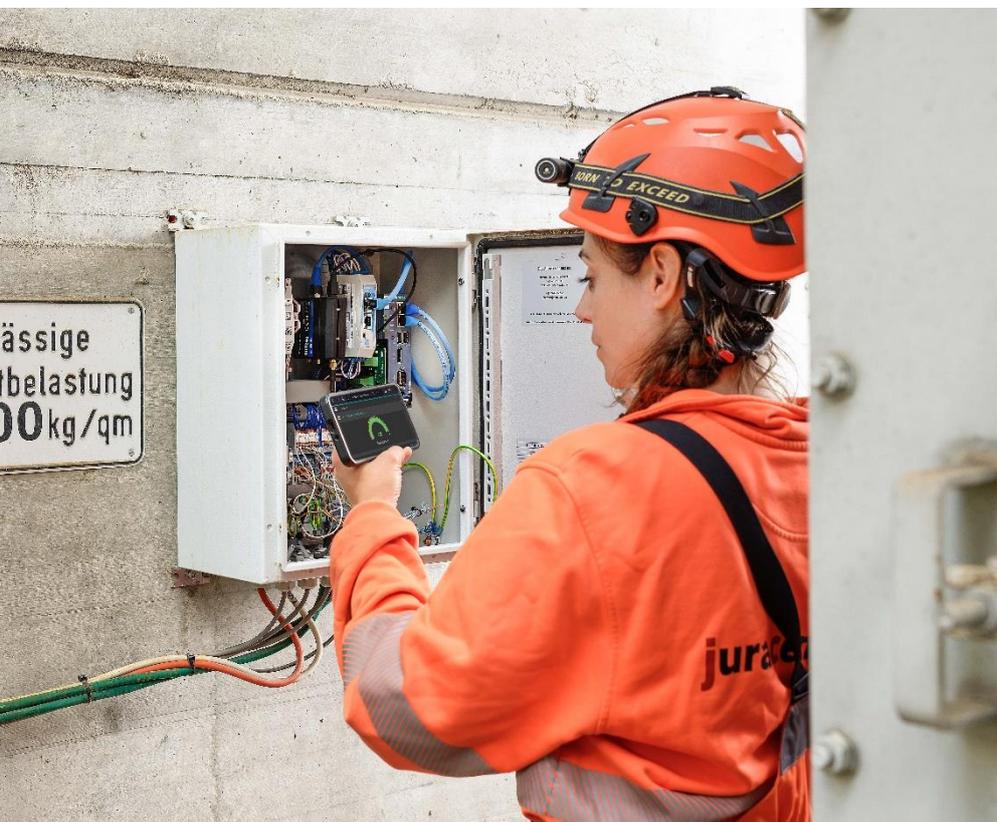
ideas. Both sides stayed open to a technology change or even a completely different solution if this was necessary.”, says Rainer Furthmann. During the whole process of development, the team challenged each other, continued asking critical questions, and constantly questioned status-quo. “We very much appreciated this kind of collaboration based on

partnership, thinking along, bringing in other perspectives and not getting bogged down. That created a real added value for us.”, so Furthmann.

Live the change. For new standards in services. For smart conveying worldwide.

Implementing a digital product in the market is not only about technology, but also always connected with organizational and mindset change. Based on a

current study*, 70% of digital projects fail! This number emphasizes the challenges of such kind of project: “Before PREMAS® 4.0 existed, we were only able to do physical inspections. PREMAS® 4.0 enables us to get into a dialogue with our customers, consulting them proactively based on shared machine data, regardless of place and time. This opens new possibilities in customer service, which is amazing.”, states Robert Morris. Change often stirs questions, doubts, and fears, internally and at customers. “PREMAS® 4.0 is a new, unknown



PREMAS® 4.0 enables the early detection of wear and aging of important machine components at AUMUND and Non-AUMUND conveying equipment.
aumund.com/en/premas-maintenance-solutions/premas-4-0

digital product. Implementing it needs time and lots of explanations – internally and in the market. Therefore, you need to meet the people where they stand. Otherwise, you won't get anywhere.", says Morris. The main challenge is to bring all people on board, give the security they need and enable them to live the change brought by a Predictive Maintenance Solution. Especially when it's meant to be set in a worldwide market: "The acceptance of Predictive Maintenance differs massively depending on the culture and business context of a country. Some don't see the reason why they should change work habits and practices.", explains Robert Morris. At the end of the day, there is no other way than act proactively, keep explaining and make the Predictive Maintenance Solution tangible.

Better together: Progress through united strengths.

A fruitful collaboration is based on bringing the best together. AUMUND's extensive know-how of 100 years in machine building with PREMAS' expertise in IoT and Predictive Maintenance. From the very beginning of developing PREMAS® 4.0 to its introduction to the AUMUND organization and to the market, AUMUND and PREMAS AG worked closely together. "There is hardly a day we do not speak with PREMAS AG.", grins Robert Morris. "Whenever I have a question or a request, I know the team of PREMAS AG is there for me." Of course, in such a project are always roadblocks on the way. With united strengths and a passionate team, the roadblocks won't disappear but become surmountable hurdles. "PREMAS AG always finds solutions. In case they haven't it right away, I can rely on them coming back to me within short time. I highly appreciate the authentic and honest way of communicating and collaborating with each other.", states Morris.



Progress matters! The PREMAS team is based in Switzerland and develops Predictive Maintenance Solutions for machine builders in the heavy industry.

The end is just another beginning

The PREMAS® 4.0 Predictive Maintenance Solution has been implemented into the market and many processes and minds changed. Besides the development of the Predictive Maintenance Solution for conveying machines, PREMAS AG strongly supported AUMUND in various disciplines such as the development of new value propositions, internal and external marketing, trainings, and the know-how development worldwide. To ensure sustainability and

continues progress a PREMAS® Competence Center has been launched, consisting of PREMAS® Experts from each AUMUND subsidiary in the world. They are working proactively on various topics to further push Preventive and Predictive Maintenance within the organization and in the market. "With this team, we created a unique network of

people sharing various perspectives, experiences, and cultures. This helps us to constantly work and develop this important topic considering the country-specific cultures worldwide.", states Robert Morris.

"We are highly satisfied with our collaboration with PREMAS AG and will continue our way together.", states Furthmann. Regarding PREMAS® 4.0, Robert Morris concludes: "It's like a baby – you can only give birth and grow together. We work every single day on it. Together with PREMAS AG."

"We could have clearly gone to other market players. But we would never have been able to develop such a specific solution, tailored to us and our customers, as it was possible with PREMAS AG."

Reiner Furthmann, Managing Director Technology

About Robert Morris und Reiner Furthmann



Since April 2020, Robert Henry Morris is the head of the department for Preventive and Predictive Maintenance at AUMUND Fördertechnik GmbH, focusing on the countries in Europe, the Middle East and Africa. R.H. Morris has years of experience, in particular with complex capital equipment, and has worked in the EMEA Region for companies connected with the mining industry. Since 2022, he also leads the brand-new PREMAs® Competence Center, an international expert team for Preventive and Predictive Maintenance.



In March 2018, Reiner Furthmann took on the position of Managing Director Technology at AUMUND Fördertechnik GmbH in Rheinberg, Germany. His main responsibilities are Research & Development, Design & Engineering, Quality Assurance, Production, Materials Management / Purchasing. Reiner Furthmann has been developing his career with AUMUND since joining in 1984, and he has progressed into this role from the position of Technical Director.

About PREMAs AG

Progress matters! Machine insights play a crucial role to optimize machines, meet customer needs proactively and take after sales services to the next level. Our mission is to empower the machine builder's after sales services through intelligent technology and data. We deliver ready-to-use but flexible Predictive Maintenance Solutions, which can be quickly adapted to a wide range of machines in the cement industry and similar industries. Create a unique selling proposition based on expert know-how and intelligent solutions from PREMAs AG. We are dedicated to support you, being a strong, reliable, and dynamic partner.

PREMAS

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