Interview with Adrian Schoch, Head of Application at Motorex AG, a Swiss family-owned company specialising in the development, production and marketing of lubricants, metalworking fluids, technical cleaning and care products and fluid equipment.

IndustryArena: MOTOREX is known for innovative solutions in fluid management. What motivated you to develop an automated system, and what particular challenges did you have to overcome?

Adrian Schoch: According to the Fraunhofer Institute, the consumption of coolant concentrate in Germany alone exceeds 25,000 tons annually. Until now, fluid management was largely dependent on personnel, and finding qualified staff has been very difficult.

We took this situation as an opportunity to address the bottleneck with automated solutions.

Six years later, with complete focus on the subject, we proudly look back on an “equipment portfolio” that is unparalleled. Initially, our devices were bulky, cabinet-like, and far too expensive to manufacture. This had to change, and we spared no effort in creating a system with entirely new methods.

In line with the tech investor Frank Thelen’s 10x DNA philosophy, we defined our product vision as being 10 times smaller, 10 times cheaper, and 10 times better than anything currently available on the market.

Why is this issue so important?
Due to a lack of or inadequate media, machine tools still experience unplanned downtime, sometimes directly during operation. At least 85% of users still measure, maintain, and refill fluids manually, recording the values in lists afterward.

Additionally, 70% of users underestimate the impact of coolants on their manufacturing results and the health of operators. Contact eczema and allergies remain the number one cause of work absences in the metal industry. Excessive concentrations can have a strong degreasing effect over time, damaging the natural protective barriers of the skin.

Representative surveys also show that 90% of machining professionals want to eliminate liquid media or at least automate their handling.

Conclusion:

The time has come for fluid automation.

The partnership with the CHIRON Group seems to be an important step, particularly for the implementation of Industry 4.0. How did this collaboration come about, and what specific added value does it offer your customers?

This partnership has been ongoing for more than 15 years, during which significant progress in media management has been achieved together. The consistent next step in this collaboration was integrating our measurement systems into the machine tools' control systems, i.e., “condition monitoring.”

This step was already realized in 2020, and the future will reveal how far this joint journey will go.

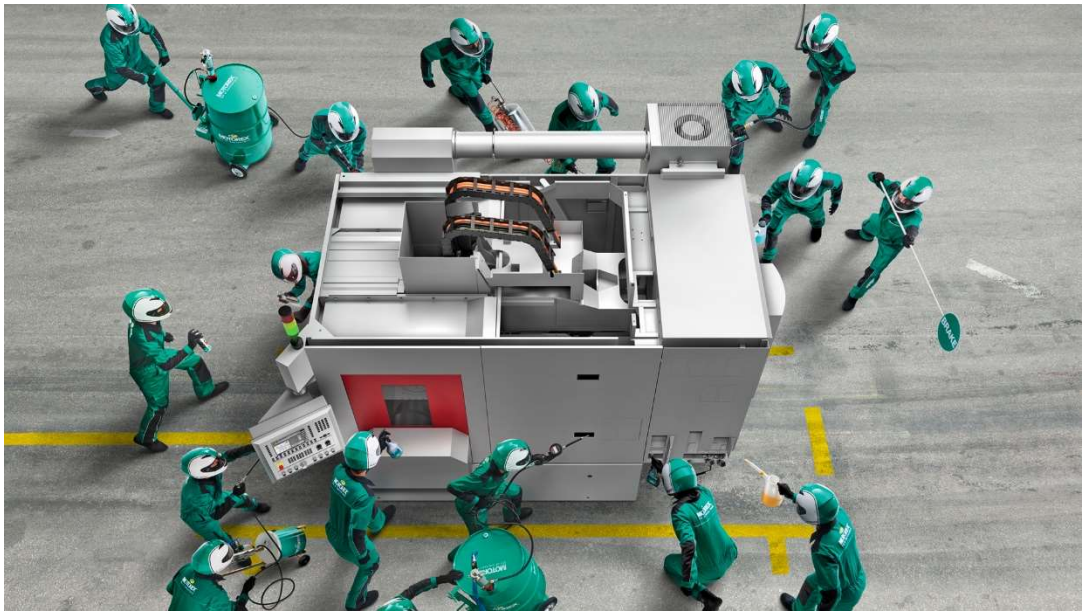
For customers, systematically capturing process data offers not only a significant advantage in documentation but also makes liquid processes significantly safer by regulating concentrations and levels. For example, a water-miscible high-performance coolant is just as ineffective at low concentrations as the absence of coolant in the machine. The declared goal is to “prevent unplanned machine downtime,” even with liquid media.

Automated fluid management systems, like those from MOTOREX, enable precise control of parameters such as pH levels and emulsion concentration. How do customers respond to this automation—do they see the added value or more complexity?

Measuring, monitoring, dosing, and testing are the four steps necessary for coolants to function perfectly in a machine tool.

Today, several hundred customers would no longer give up this automation service. The systems’ complexity decreases daily as we learn from ongoing projects and data. For instance, our FLUID LYNX COOLANT is already in its fifth generation of hardware.

Our “racing gene” drives us to continuously enhance customer benefits, performance, and simplicity with each innovation.



Customers now practically experience none of the complexity behind the scenes. They benefit from reduced consumption, maximum availability, an established service team, and the advantages of remote maintenance.

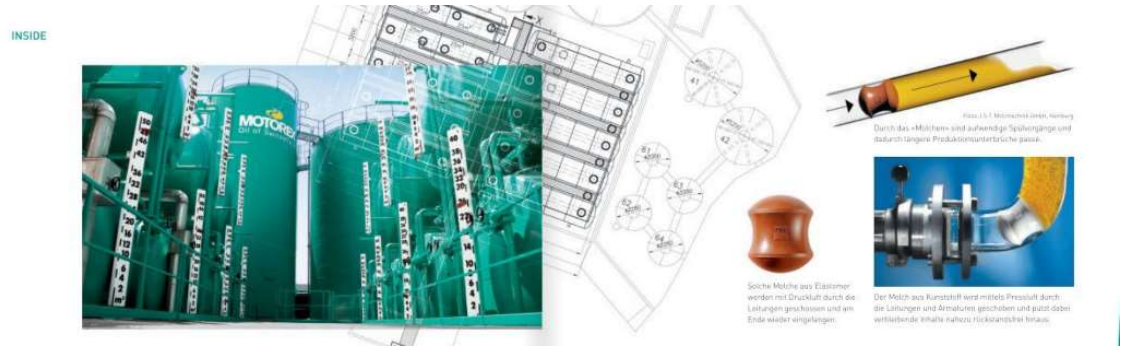
Producing over 40,000 tons of lubricants annually requires significant resources. What is MOTOREX doing to minimize its ecological footprint?

It starts with sourcing raw materials and extends to modernizing production and taking back used products.

Our new building, completed in time for our 100th anniversary, generates 100,000 kWh annually from 573 m² of solar panels.

Hundreds of feed pumps were converted to frequency-controlled systems, saving over 70,000 kWh per year alongside a compressor management system. Temperature reductions in various halls and building insulation measures save an additional 36 tons of CO_2 or 136,000 kWh annually.

As one of the few manufacturers, we even clean our internal pipelines using a specialized "pigging system." This technology, which works like a message in a bottle, eliminates the need to flush pipes with cleaning oil during batch changes, reducing waste by 98% and improving quality. This method, typically used in food production, also prevents unintended product mixing in the process chain.



Despite stricter regulations and higher demands, MOTOREX has achieved significantly better results compared to the previous year and ranks among the top 19% of over 2,000 companies in its category.

Some industry experts believe that coolants and similar chemicals could eventually be replaced by more environmentally friendly technologies. What is MOTOREX's position on this—do you see this as a realistic scenario or a major challenge?

These technologies have been available for some time and are rightly established in the market. The last major revolution, 3D printing, still holds the greatest potential in our view.

However, dry machining, cryogenic cooling, and minimum quantity lubrication also have their place. We expect the overall use of machining products to decrease in the future, but their quality requirements will likely increase. A complete substitution is unlikely within the next ten years.

Sustainable products are the key to the future, and we are prepared for the next 100 years.

BIO OECD 301 B	EU Ecolabel www.ecolabel.eu	BLAUER ENGEL DAS UMWELTZEICHEN	SP
Schnelle biologische Abbaubarkeit von > 60 % innert 28 Tagen	Umweltlabel EU-Ecolabel (EEL2011/381/EU)	Umweltlabel Deutschland Blauer Engel (BE) RAL-UZ 178	Umweltlabel Schweden

How does MOTOREX ensure the quality and durability of its products, especially for highly specialized applications like the automotive, aerospace, or medical industries?

Like a "top chef," a decisive factor lies in the raw materials. We secure raw material volumes not just to overcome temporary shortages but to maintain consistency within tight tolerances.

This is crucial for coolants, where formulations can involve up to 26 ingredients. The mixing process in blending facilities is automated for almost 100% of our products, monitored live in real-time, and logged.

No raw material enters our warehouse without first being analyzed, documented, and approved in our lab—ensuring 100% control and eliminating surprises. This approach, combined with partially

automated, robot-controlled logistics, guarantees consistent quality and competitive prices, whether produced in the USA, France, Poland, or Switzerland.

With the introduction of the smartphone-based Easy Monitoring App, MOTOREX offers a cost-effective entry into fluid management monitoring. Are there plans to expand this technology or offer additional features?

This technology provides enormous benefits, allowing users to query and document fluid conditions in just one minute. Not only have we won awards for this innovation, but we also see great potential for other fluids and applications.

In 2025, we will take another milestone step in this area, but it's too early to reveal details. This technology helps customers quickly collect data and easily check the condition of aqueous media in their operations.

Finally, looking to the future: What goals and challenges do you foresee for MOTOREX over the next five to ten years, and what role could new trends like AI and further digitalization play?

Our goal is to establish an inline system for monitoring all types of liquid media, akin to a navigation system that not only guides the way but makes the journey much more relaxed. As long as the destination is correctly entered, today's intelligent navigation systems avoid traffic jams and roadblocks using real-time data.

Translated to fluids, an inline measurement and regulation system is not just a luxury but an affordable standard for any production process using liquid media. Process improvements will be made in hundreds of applications through machine learning, and simple software updates will let all customers benefit at the push of a button.

Additionally, the products we deploy are already being developed with these criteria in mind. This enables lifespan predictions that offer decisive advantages when planning manufacturing jobs. Customers will always know the status of their media, ensuring a competitive edge in both cleaning and machining processes.

Mr. Schoch, thank you very much for the interesting interview.