

AI adapted Factory



AI Integration in Hydrogen Production

Intelligent Manufacturing along the Hydrogen Value Chain

Artificial Intelligence is transforming the way fuel cells and electrolyzers are manufactured. As part of the Agile Robots ecosystem, Krause Automation combines decades of automation expertise with next-generation AI technologies to improve productivity, quality and operational flexibility.

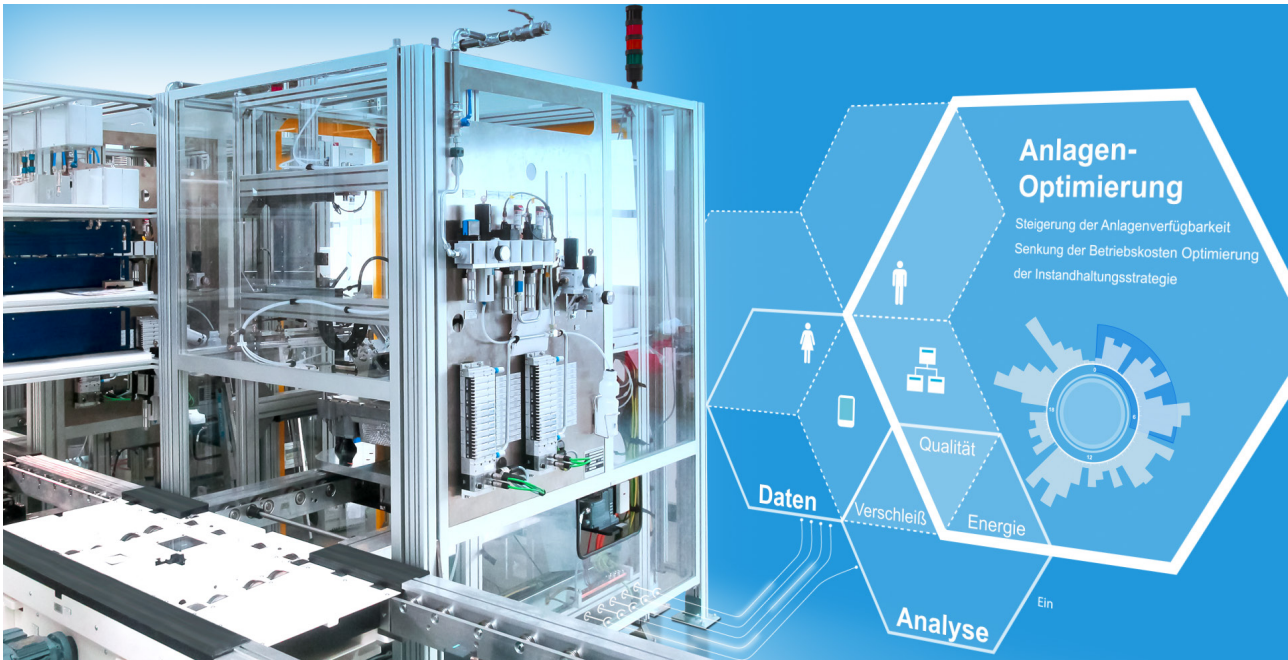
Our approach integrates AI into key manufacturing processes, including MEA production, bipolar plate manufacturing, stack and system assembly, testing and factory operations. AI-supported systems analyze production and quality data in real time, helping operators identify optimization opportunities and maintain stable production processes.

By combining automation, data intelligence and robotics, manufacturers gain improved transparency, faster decision-making and reduced downtime. This supports more efficient production ramp-up, higher resource efficiency and continuous process improvement.

Looking ahead, Physical AI and humanoid robotics will further increase manufacturing flexibility by supporting complex tasks that traditionally require manual intervention. This creates adaptive production environments capable of responding efficiently to changing demands.

With Krause Automation, customers gain a trusted partner for integrating AI technologies into real-world hydrogen production facilities.

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Advanced Manufacturing Intelligence Platform

Our digital manufacturing platform combines production management, quality management and machine monitoring within a single environment. AI-based analytics convert production data into actionable insights, enabling better operational decisions.

By connecting machine, process and quality information, manufacturers gain greater transparency across their operations and establish the foundation for continuous improvement and scalable growth.

Our solutions

- AI-Assisted Production
- Intelligent production monitoring
- Process optimization using real-time data
- Automated anomaly detection
- Support for production ramp-up

AI-Driven Quality Management

- Automated defect detection
- Vision-based quality inspection
- Quality prediction and improvement
- End-to-end traceability

AI-Powered Asset Management

- Predictive maintenance
- Equipment health monitoring
- Optimized maintenance planning
- Increased equipment availability

AI-Enabled Workforce Support

- Operator assistance systems
- Digital work instructions
- Intelligent troubleshooting guidance
- Faster onboarding and training

What we stand for...

- Experience and Expertise in the field of hydrogen technology for over 10 years
- Delivery of professional pre-project consulting services
- Experiences in investment cost and support in complete factory planning
- Serving the entire production value chain alongside our partners and supplier network
- Innovative products and design concepts for customized requirements
- Reliable turnkey solution provider for manual or mass production systems

We are the **H** of Hydrogen

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