



Diehl Metering Plant Automation | Case Study Test Stands

Automated Production of Water Meters

This retrofit at Diehl Metering GmbH ensures production capability and spare parts availability for the coming years. REX AT replaced the already 26-year-old control technology of a supply system for water meter test stands.

“REX AT is a highly valued business partner. The trusting cooperation significantly contributes to the success of Diehl Metering.”

Michael Wlodkowski | Plant Manager Diehl Metering GmbH – Apolda



Objective

The supply system regulates the central water system for the test stands in production and development. The PLC control of the system has been in use for 26 years and is to be replaced to ensure spare parts availability and support for the coming years. In case of age-related failure, production in Ansbach would be at risk. The task of the team from the Erfurt-based subsidiary REX Automatisierungstechnik:

- › Replacement of outdated hardware components including control technology
- › Long-term assurance of production capability
- › Spare parts availability
- › Function extensions and optimization
- › Efficient visualization
- › Excellent service and support through the implementation of remote maintenance
- › Preparation for data acquisition and logging

The Customer

Responsible management of valuable resources like water and energy: Diehl Metering is a global leader in the development, manufacturing, and delivery of smart metering solutions. From Germany to the world: With over 160 years of experience, the company today enables utilities, municipalities, and industries to take control of their infrastructures. Diehl Metering is a pioneer in AI for data-driven insights, IoT connectivity, fully flexible software, and seamless intelligent metering systems.

At the Ansbach site, water meters are manufactured for every need: ultrasonic meters, single- and multi-jet meters, Woltman bulk water meters, piston meters, extreme nominal sizes, and custom versions.

Performance by Eckelmann

- › Electrical engineering
- › Development of user interface HMI
- › Electrical equipment and control technology
- › Installation including wiring
- › PLC software development with Siemens S7
- › Commissioning



› Successful installation with a “double bottom:” The company subsidiary REX Automatisierungstechnik replaced the control system of a water meter testing system that had already been in use for 26 years. When testing the electrical equipment, including the control technology, the REX AT team ensured that it was possible to switch over to the existing, old system during trial operation of the installation.

The System

The supply system in Diehl Metering’s production has a collection tank with 18 cubic meters of water supply. Pumps ensure the same level in two high tanks with 2.5 cubic meters each of cold and hot water and supply the test stands with constant water pressure.

The test stands serve both the quality testing of the water meters manufactured at the Ansbach site and the testing of already used water meters for their measurement accuracy. Diehl Metering is a recognized testing laboratory for water and heat meters and uses the system for service orders to test devices that show anomalies in operation and to create court-recognized expert reports.

Due to the high utilization, the system operates in three-shift mode six days a week.

24/6 running	Annual System Availability	Produced Water Meters	Dimensions up to max.
3 Shift Operation	51 Weeks	700 per Year	300 DN

Special Features

- › REX AT utilized the existing peripherals and supplemented both a new control system and a new HMI.
- › An installation with a “double bottom:” During the testing of the electrical equipment including contro technology, it was always possible to switch to the existing old system during trial operation. This fallback had to be possible at any time during the installation.
- › To disturb the production processes as little as possible and avoid production downtime, the conversion was carried out by the REX AT team during the Christmas and New Year holiday period.



Do you have any questions?

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