



# *Product catalogue*



## Good reasons for ...



### Hardware · Software · Control and Regulation Technology



- + **Many years of business experience across several industries** (Automobile, plastics, beverage industry and many more)
- + **Entire project implementation** from planning, control cabinet production to programming, electrical installation and start-up
- + **Customised concepts – tailored solutions**
- + State-of-the-art **control technologies**
- + **Fast reaction in case of trouble** via remote maintenance
- + **Service and optimization** also on third-party products
- + **Synergy effects** (assembly, construction, software, start-up) through integration into the PütZ Group



- + Established in 1988, approximately 90 employees
- + Many years of industrial experience
- + Central capital base / local flexibility with the greatest degree of freedom and responsibility

**PütZ Prozessautomatisierung GmbH**  
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For greater productivity and quality:

## Control system modernisation – even for third-party manufacturers' equipment!

### Is your control system ready for Industry 4.0?

Your equipment's intelligence lies in its control system. Modern visualisation systems display the entire process chain including all sub-processes virtually and help to optimise components, create process understanding and thereby facilitate operations. Visual monitoring alone no longer meets today's requirements in terms of quality improvements, speed and reduced costs – automated quality control systems are the future.



Talk to us to get your plant's control system ready for the future too.



Our customers are increasingly looking for the following modernisation measures:

- **Upgrades to robot control systems**  
e.g. KUKA KRC 1/C2 to KRC 4, ABB S4C Plus to IRC 5 or to suit customer requirements
- **Conversion to the latest control technology**  
(Siemens, Allen Bradley, Omron, Mitsubishi, VIPA, Schneider, Beckhoff, SEW, etc.)
- **Process data acquisition**  
for continuous production optimisations
- **Installation of camera systems**  
for automated quality control

## Your benefits following the control system modernisation:

- **Detailed product data acquisition**
- **Easy-to-use user interface**
- **Desired functions**  
you have been missing so far (after testing)
- **Control system connection to a higher-level network**
- **Display and adjustment of all process parameters on a touch panel**
- **Equipment of the plant with a remote maintenance system**

## Steuerungsmodernisierung

This, amongst other things, is what we offer you:

- ✓ Exchange your PLC for the latest Siemens control system or similar
- ✓ Exchange your control unit for a Siemens Comfort Panel, Siemens Industrial PC or similar
- ✓ Programme changes on request
- ✓ Exchange/modernisation of old control cabinet components and control cabinet technology
- ✓ Expansion of existing equipment (incl. third-party products manufacturers) and, if necessary, troubleshooting
- ✓ Training and commissioning support



### Automation, control and regulation technology

CAD electrical engineering design  
(EPLAN 8 incl. Fluid / WSCAD / ELCAD)

Control cabinet construction

Electrical installation

Software (all standard manufacturers)

Control and regulation technology

Networking with higher-level control systems / databases



### Our services = Your benefits

Construction and planning

Creation of AutoCAD drawings  
(EPLAN 8 incl. Fluid / WSCAD / ELCAD)

Plant production

Control system equipment

Commissioning up to the handover to production

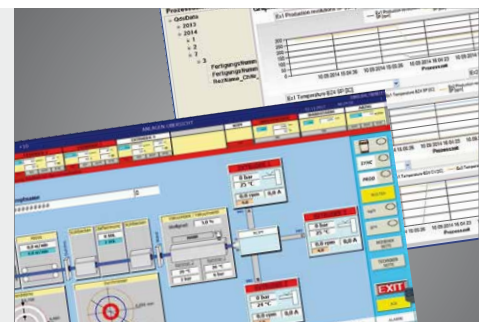
Employee training and operator instruction

Complete documentation

CE certification

## Everything from a single source

As a subsidiary of the **Pütz Group**, we offer more than just process automation. The joint development of ten mechanical and plant engineering companies to date has produced **synergy effects** that benefit our customers.



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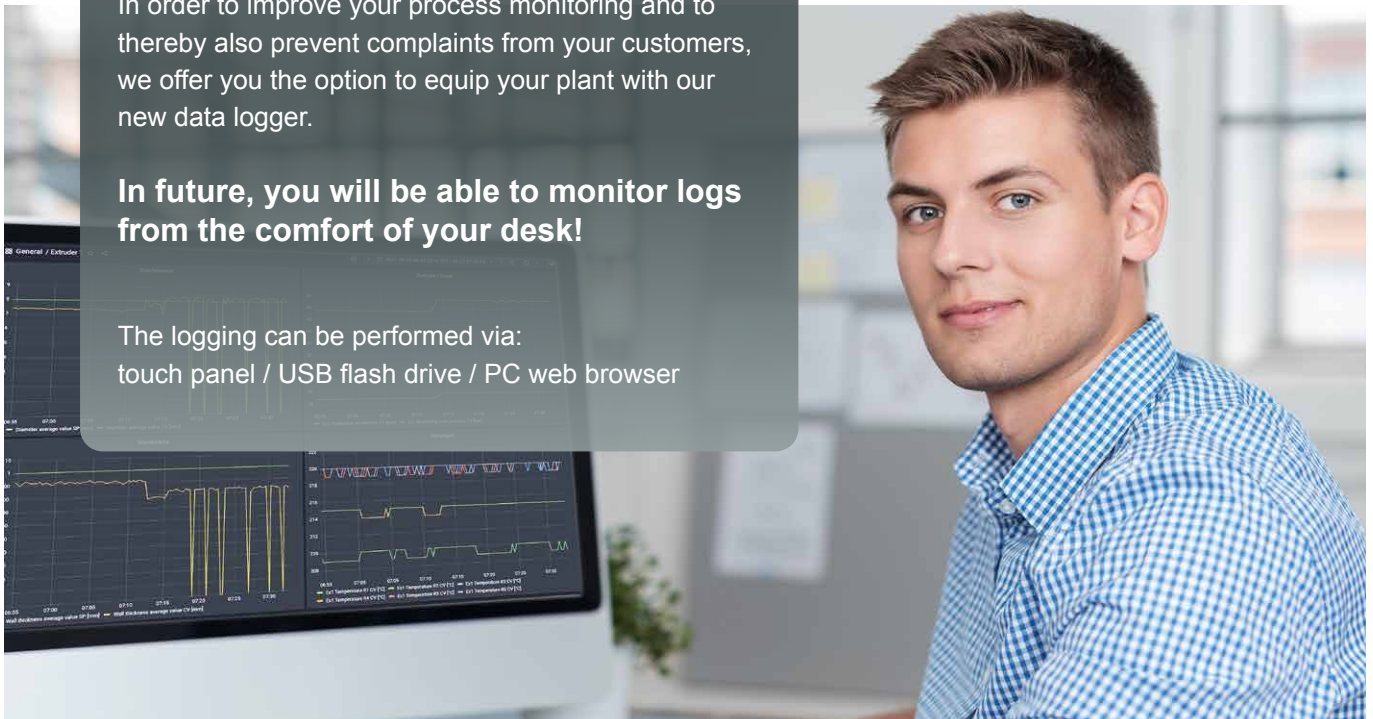
## Data logger for production data acquisition



In order to improve your process monitoring and to thereby also prevent complaints from your customers, we offer you the option to equip your plant with our new data logger.

**In future, you will be able to monitor logs from the comfort of your desk!**

The logging can be performed via:  
touch panel / USB flash drive / PC web browser



### Your benefits:

- + **Retrofitting is also available for existing plants**
- + **Modular construction to suit individual customer requirements**  
Measurement values can be read from the control unit or directly from the sensors
- + **Intuitive user interface**  
Constant data recording of all process-relevant parameters, e.g. production/fault times
- + **Connection to higher-level systems,**  
(e.g. OPC, MQTT, SQL, ...)
- + **Data export in standard formats**  
(e.g. Excel)
- + **Location-independent display of graphs in the web browser from any PC**  
(customer network)
- + **Backups on a USB flash drive and synchronisation to the customer network are possible**  
(FTP, SMB, ...)
- + **Extensions to suit specific customer requirements are available**  
(incl. retrofitting)
- + **Automatic backups**  
to external storage media
- + **Optionally**  
with a separate monitor

## Data logger for production data acquisition

## We offer comprehensive services and expertise:



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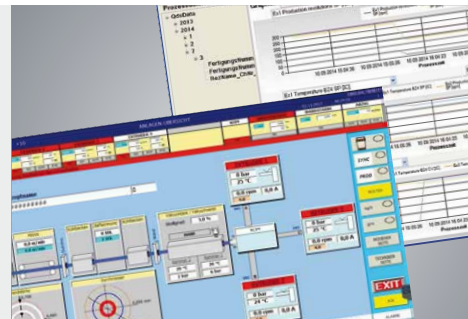
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## Project description

# Test cabinets for capacitors

### Task:

A test cabinet control system for a world-leading test equipment supplier.

The DUT, measuring instruments, process and test parameters were specified. All devices should be controlled fully automatically, as the test may take several weeks.



## Our solution concept:

### Feasibility analysis:

The test and measuring devices communicate via the **RS232, RS485 and CAN bus protocols**. Since the process mainly involves data handling and because the visualisation should be accessible via an external PC (web browser), a **Linux-based system** was used instead of a classic PLC. Furthermore, it was crucial that the test cabinet door could only be opened in a de-energised state. For this purpose, appropriate **sensors** were selected, and a **safety control** was installed.

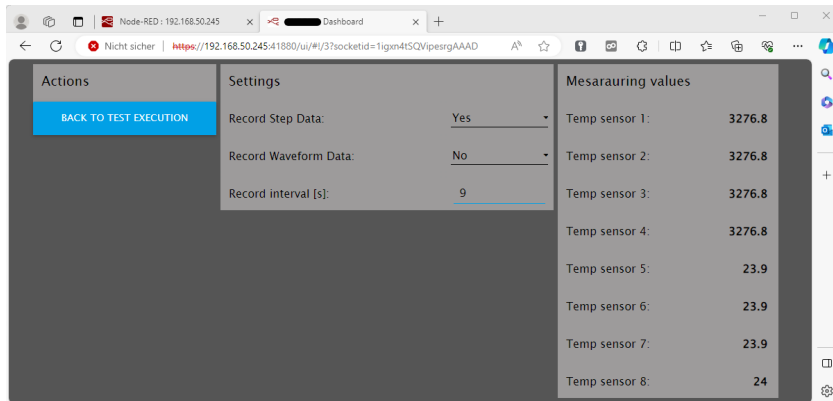
### Control system:

Revolution Pi with Raspbian Linux, Android touch panel

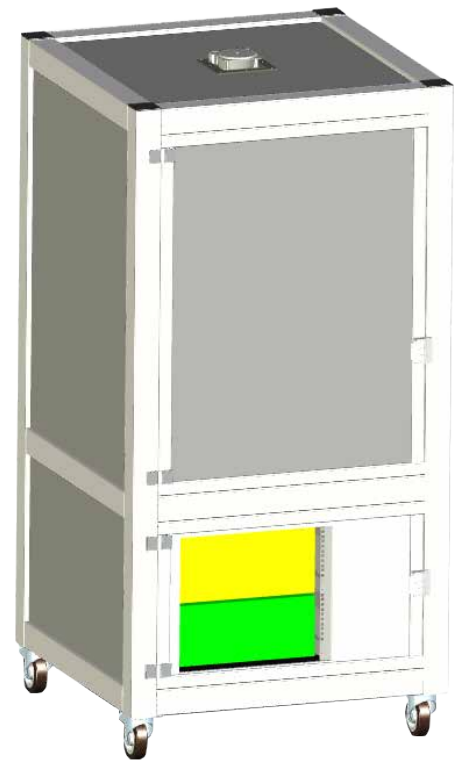
### Plant operation:

The plant's operation takes place via a **12" touch panel**. The touch panel's web visualisation can also be opened and displayed from an external PC. The panel allows the user to set the parameters as well as to start and stop the testing process. During the test, the test results are displayed in an XY diagram.

## Test cabinets for capacitors



Plant operation via a 12" touch panel

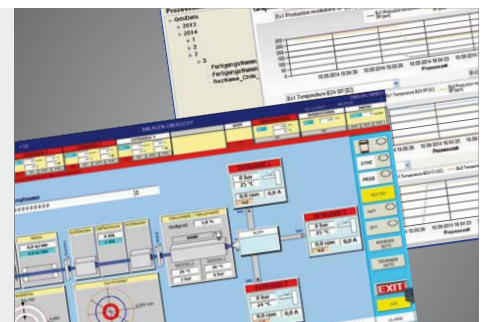


## Our scope of services:

- Feasibility analysis in cooperation with the client
- Control concept development
- Electrical design
- Control cabinet construction
- Electrical installation
- Commissioning in the factory and at the end customer's site

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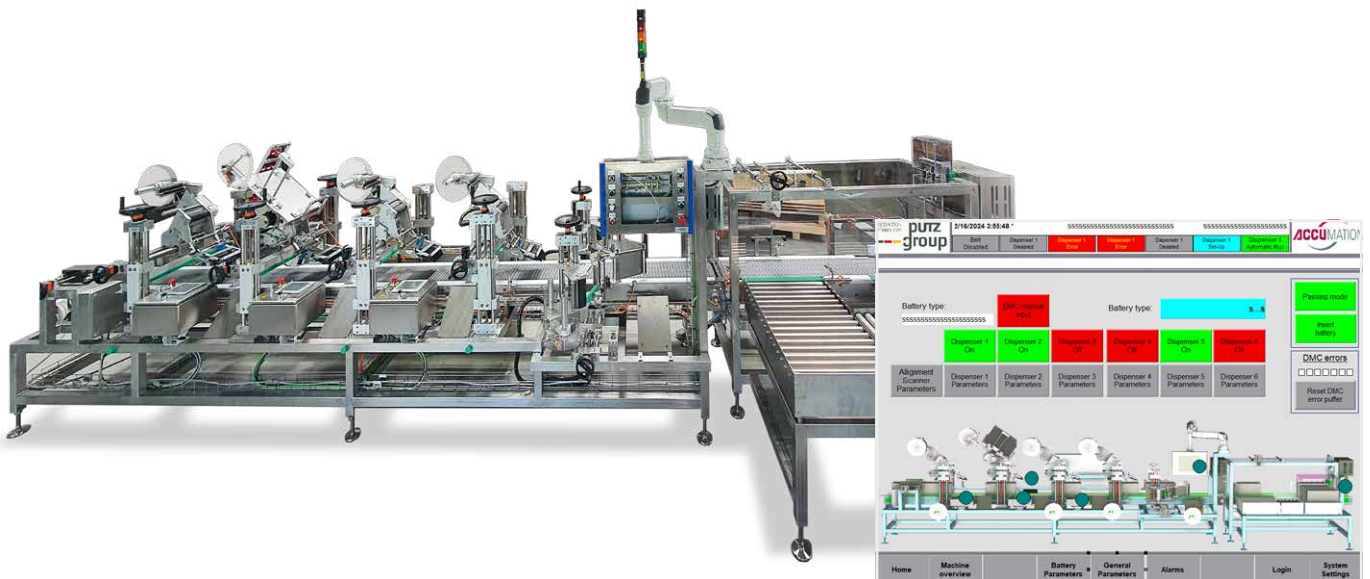
## Project description

# Labelling system

### Task:

The automation of a labelling system for batteries in cooperation with **Accumation GmbH** in Limburg-Offheim.

Automotive batteries are to be conveyed on a conveyor belt that runs beneath label dispensers. The corresponding labels should be printed and applied to the batteries during the conveying movement with an accuracy of +/- 0.25 mm.



Plant operation via a 15" touch panel

## Our solution concept:

### Feasibility analysis:

Calculations have been performed to determine all signal transit times that have to be achieved in order to reach an accuracy of +/- 0.25 mm. In doing so, all disturbance variables, such as sensor running times, bus cycle times, belt speeds, etc. had to be taken into account. A **control concept** based on Allen Bradley components was then developed and used for the practical implementation. A **label printer**, which prints the labels to be dispensed immediately prior to their use, was also integrated **via TCP**. This code was later validated with an appropriate **scanner**.

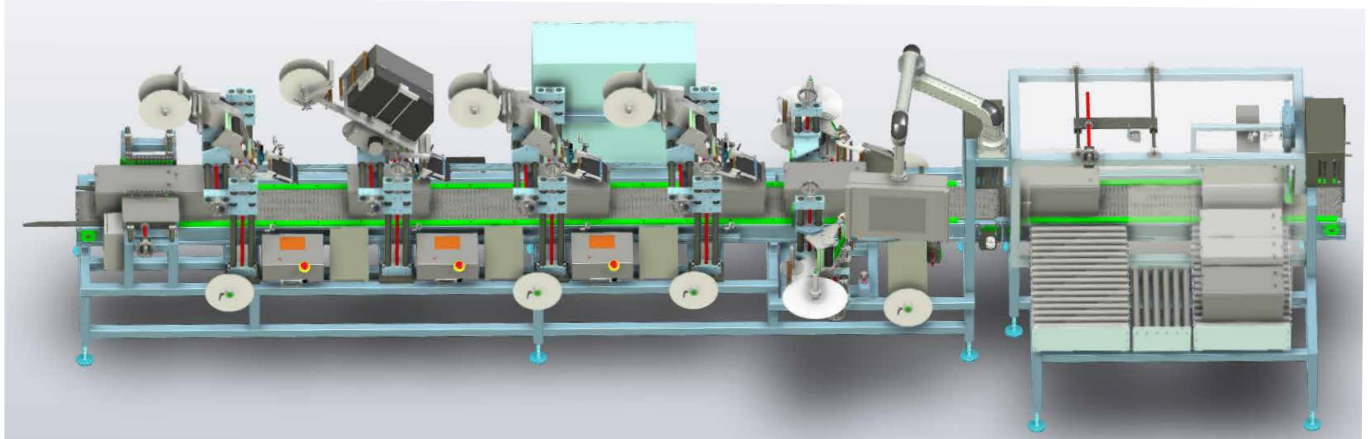
### Control system:

Rockwell Logix PLC with a PanelView 15" touch panel

### Plant operation:

The system is operated via a large **15" panel and several small control points** on the dispenser heads. All parameters can be conveniently set on the main control panel and selected from existing recipe lists. During operation, **individual dispensers can be deactivated** and **product changes can be implemented**, so that the system never has to come to a standstill.

## Labelling system

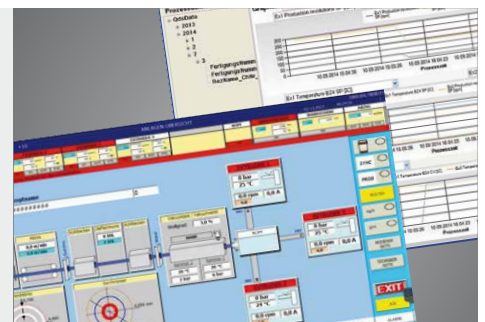


## Our scope of services:

- Feasibility analysis and control concept development (Allen Bradley)
- Electrical design
- Control cabinet construction in line with UL guidelines
- Electrical installation
- Commissioning in the factory and at the end customer's site

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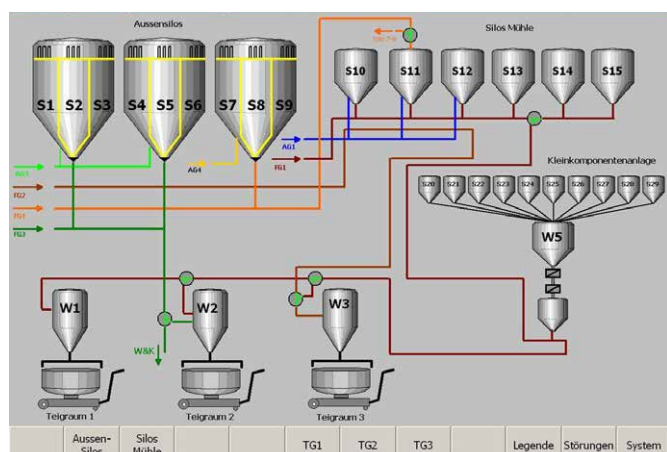


**Project description**

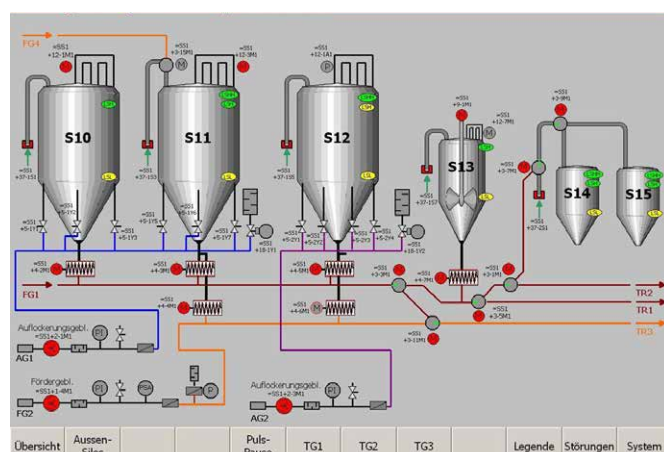
# Automation of an industrial bakery

**Task:**

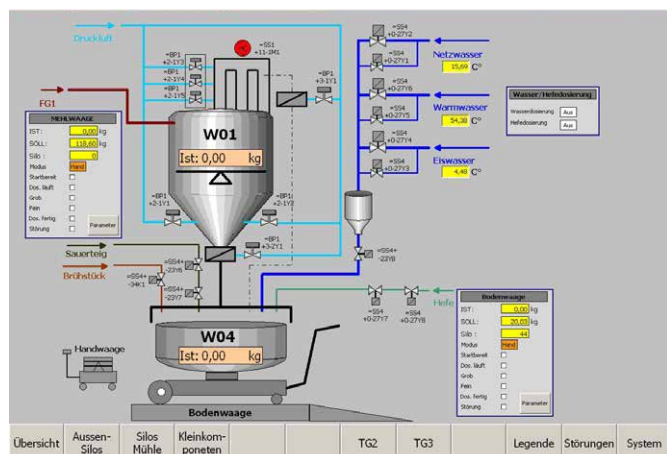
Based on stored recipes, the respective charging jobs are transferred to the control system, which controls the supply of the individual components and reports back the quantities actually consumed.



System overview



Silo fill levels



Dough room 1

## Our solution concept:

- The superimposed visualisation is a graphic representation of the plant.
- All error messages are received here and archived.
- Any adjustments required can be made from here.
- The control system covers:  
Flour silos, scales, dough rooms and the ingredient supply, e.g. water and yeast

## Automation of an industrial bakery

### Technical details:

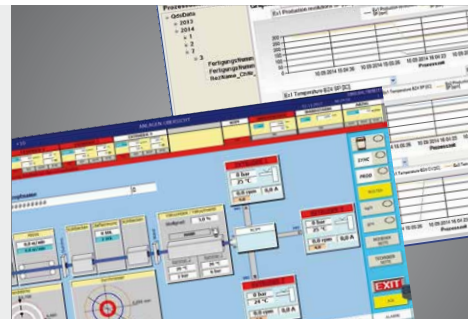
<b>Visualisation</b>	WinCC Flexible
<b>Central control system</b>	Siemens S7-414-2DP with integrated PROFIBUS interface
<b>Water dosing control system</b>	Siemens S7-315-2DP with integrated PROFIBUS interface, Sartorius weight controller with integrated PROFIBUS interface

### Our scope of services:

- Design and planning  
Creation of AutoCAD drawings  
(EPLAN 8 incl. Fluid / WSCAD / ELCAD)
- Plant production
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## Project description

# Control system modernisation with production data acquisition

on a multifunctional test automation device for battery production.  
Client: **Accumation GmbH** in Limburg-Offheim.



### Task:

- Mechanical overhaul of the existing system
- Renewal of the control cabinet
- Installation of up-to-date control system technology
- Direct connection of the test equipment to the control system (RS232, TCP), so that in future all test data is available within the control system. This data is then stored in a database (assigned to the respective battery).
- Minimisation of operator interventions thanks to an operator-friendly HMI and plant control system



All machine components can be operated interactively, directly in an assembly drawing of the machine.

## Our solution concept:

### Functional sequence:

The battery is subjected to a variety of tests at several successive stations.

The DMC code of each respective battery is recorded in the machine inlet, so that the test results can be assigned to the correct battery. The operator can easily monitor the current status of both the machine and the batteries.

In the event of a fault, the operator can restart production with little effort. Neither manual home position runs nor a removal of the batteries are required.

By tracking each part (via sensors), the machine control system detects the battery's exact position on the conveyor belt, including whether it has already been checked or whether it must be rejected at the end.

The machine also detects whether the corresponding stations require a home position run once a fault has been remedied. The latter takes place automatically and collision-free without any operator action being required.

## Control system modernisation with production data acquisition

### Operating concept:

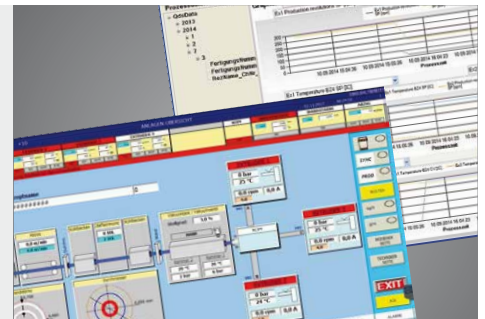
- ✓ All machine components can be operated interactively, directly in an assembly drawing of the machine.
- ✓ In the event of a fault, the faulty components are displayed flashing red directly in the system overview.
- ✓ To operate individual components in manual mode, it is only necessary to touch the corresponding actuator.
- ✓ The functionality of all sensors can be checked in the overview.  
They are displayed together with the device designation used in the circuit diagram.

## Our scope of services:

- Construction and planning
- Creation of AutoCAD drawings  
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## Project description

# Connection of an existing production machine to the customer network

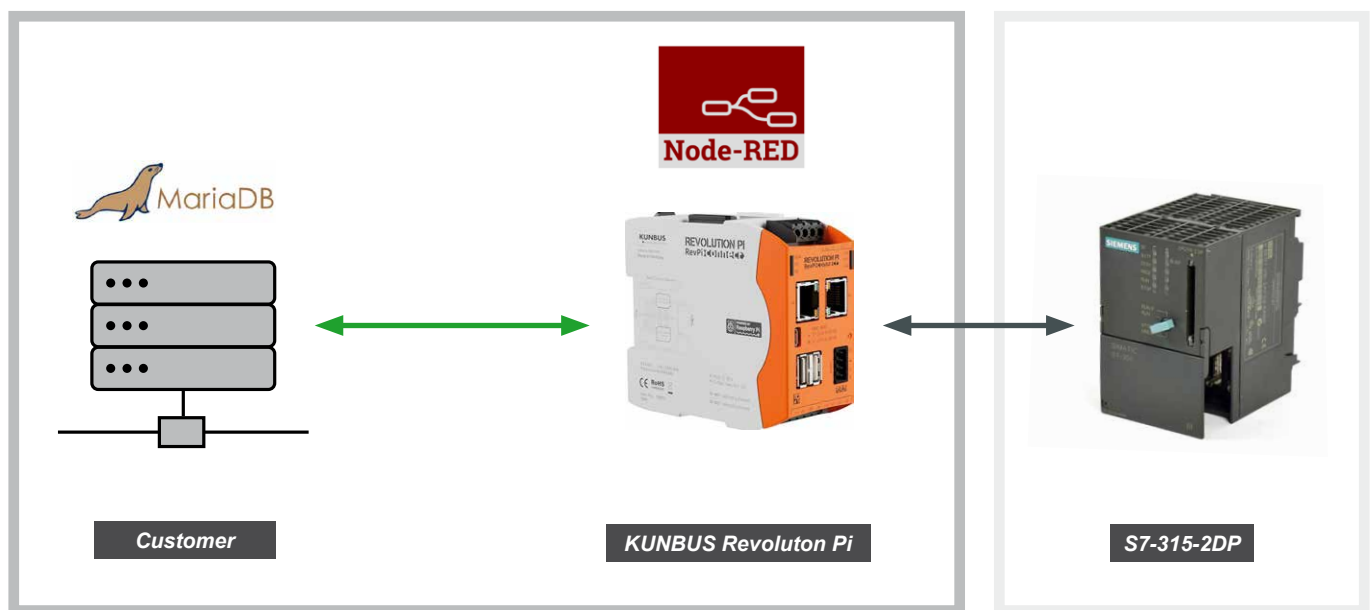


### Task:

The retrieval of setpoints from an already existing job database.

The existing production plant separates bar material into shorter workpieces according to the end customer's requirements. The raw material can have a range of properties. Until now, the end product parameters stored in the customer's order management system had to be printed out for each order and were then entered manually into the separation system by the operator. Due to the number of parameters involved, this could lead to incorrect entries and increased reject numbers.

An analysis performed jointly with the customer showed that all data is available in a MariaDB database on the customer's server.



## Our solution concept:

- Minimal modifications to the existing machine  
Connection of the **KUNBUS Revolution Pi** to the existing Siemens S7-315-2DP via PROFIBUS
- Installation of a **development tool** that creates a connection to the customer's database for communication and data handling purposes

## Connection of an existing production machine to the customer network

### Result:

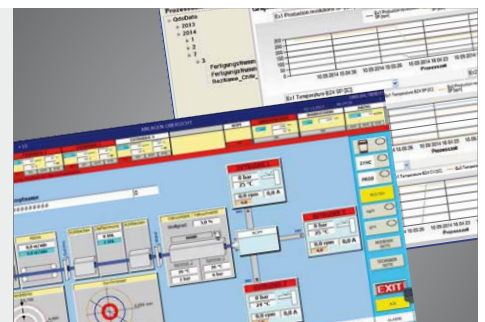
- ✓ The cutting machine automatically receives the relevant setpoints.
- ✓ The process can be started simply by acknowledging a corresponding message on the control panel.
- ✓ The machine automatically updates the customer's database. As a result, the order management system is always kept up to date, including in relation to already produced parts.
- ✓ Thanks to the modular design, the newly created application can also be installed on other production machines with minimal effort.

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*AUTOMATION,  
CONTROL AND REGULATION TECHNOLOGY*



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