Big Data

We bring light into the dark!
Recording, pooling and analysing data

Today's machines and process controls are no longer island solutions. Data collected in machines and processes is managed and analysed centrally with the aim of continuously improving the operation of the machine or process implementation.

Extracting such information simply and easily from its production process to analyse it quickly and efficiently can now be carried out effectively with the new ViCON software.

The central hub for collecting and analysing information is the operating data acquisition. This is all process-relevant machine data made available by the reflow soldering system. This includes both transport speed, temperatures, fan speeds, energy consumption, nitrogen consumption, as well as setting parameters, production information and status displays.

With the increased proportion of sensor technology in modern production systems, ever greater importance is placed on the effective collection and analysis of the rising volume of data. With the ViCON VisionX you have at your disposal system software that is already able to cater to the requirements of future analysis tools.

MES systems are already in use to completely plan and monitor the production process at company level, and not only in terms of Industry 4.0. Production control at this point is virtually crucial today to be able to meet the requirements in terms of quality and product liability. The variety of MES systems on the market requires individual adjustment of the data transfer from the Rehm reflow soldering system to the customer's superordinate MES system. Rehm uses its own ROI interface (Rehm Open Interface) that prepares customer-specific operating data acquisition information and transfers this pooled to the MES system.

MES connection in production
Process control at company level

Manufacturing companies are ever more reliant upon process-oriented operating manufacturing execution systems (MES). Within the software architecture, these MES systems feature below the ERP systems and above the production level. The ERP system has a view of the entire company and allows logistics to be optimised across all locations. The MES system, on the other hand, focuses on a company's individual production lines.

The MES system continuously collects all arising operational data along the material flow of these production lines and makes these available to the superordinate ERP system. It is then possible to ensure the seamless traceability of products, components or batches in this way. Optimisation potential and process improvements can only be identified and exhausted with the help of this operational data.

Enterprise-Resource-Planning (ERP)

Company level

Manufacturing Execution System (MES)

Production control at company level
Superordinate production management system for planning and monitoring production processes

Operational level

Rehm Open Interface (ROI)

Data transmission
Data is transmitted with the help of an interface with the superordinate manufacturing management system

Host computer |
OIC (Overall Inline Communication)

Production level

Process locking

Control
Comparison of the configured program with the assembly to be manufactured

Stop
Entry will be blocked if there is no agreement

Operational data acquisition

Production monitoring
Recording process-relevant data with the system software, e.g.
> Operation status
> Alarms

Traceability

Traceability
of all process-relevant data, e.g.
> Serial number
> Order number
> Temperatures
> Speed
> Residual oxygen value