



Your Way to Digital Production

Software solutions for the pharmaceutical, medical technology and cosmetics industries:

- Increase line productivity in real time
- Digital Production Data Acquisition (PDA)
- Efficient and error-free production planning

With Planning and Transparency to an Optimized Digital Production

Special Challenges in the Industry:

Lines such as those used today in the area of filling or packaging usually consist of a large number of inter-linked units, which means they have an inherent potential for disruption. The high investment costs coupled with the high personnel requirements on the lines also make downtimes a major cost risk. Therefore, all measures that lead to a significant and permanent reduction in downtimes are a profitable investment.

In addition, the pharmaceutical industry is one of the sectors with the highest regulatory requirements. Here, the FDA regulation 21 CFR Part 211 as well as the EU GMP guidelines and GAMP 5 for the introduction of automated systems apply. In particular, the control and documentation of processes are subject to strict regulations, which is why they can make the introduction of Manufacturing Execution Systems (MES) a costly and time-consuming process.

Approach to Digital Production

Introduce our FASTEC 4 PRO system for production optimization with comparatively little effort. Through permanent productivity control and analysis of the reasons for downtimes in the machine park, you can significantly reduce downtimes and cut costs. Without interfering with the existing controls, additionally installed light barriers provide the signals required for this purpose. The validated processes are not affected. The introduction is significantly faster and comparatively inexpensive to implement.

On average, projects carried out by us achieve productivity gains in the double-digit percentage range. The Machine Data Acquisition (MDA) system permanently monitors the productivity of the lines and systems and records any disruptions that occur. It uses meaningful KPIs (such as the OEE key figure) and provides them in insightful analyses. As a result, in many of our projects, Machine Data Acquisition is the first step towards sustainable optimization of production.

With the FASTEC 4 PRO module Detailed Scheduling (DS), you get transparency at all levels. Production coordinates the dependencies between bulk, filling and packaging departments. Throughput times can be shortened by minimizing set-up times. Live data from production also allows you to react to unexpected events in real time.

Your benefits:

- **Transparent high quality data: Digital – in real time**
- **Detailed planning projects to optimize production processes**
- **Software solutions that are easy to implement – even without complex GMP validation**
- **Fast system rollout and prompt results combined with low investment costs and low expenditure of time**



Our Systems for Digital Production – Can Be Implemented Quickly, Flexibly and Future-Proof



Quick Start: OEE Measuring Device easyOEE

Are you interested in the productivity of a plant? We have the solution. Our productivity measuring device easyOEE is a complete system that provides exactly this key figure. It provides permanent monitoring of the machine status and display of production key figures in real time. You do not need any additional hardware or software components. The quick and easy-to-install plug-and-play complete system is your perfect entry into transparent production: Via LAN, WLAN, directly or offline using a USB token. Enter the digital world of manufacturing – installed by us or contactless via remote.

For easy commissioning, FASTEC 4 PRO does not require an interface to the higher-level ERP. The software allows you to create and start a production order ad hoc via the article registration function.

Real-time data: Thanks to live monitoring across the entire line(s), you see where rejects or malfunctions occur at any time – and at all levels. After registering a production order, the set-up times for the individual orders are automatically recorded. In addition, interruptions are automatically recorded, which can then be explained manually or by a machine signal. The performance recording puts the current master data to the test. The clocks of the plant are detected, e.g. via a light sensor. This means that the discrepancy between the potential technical performance of the system and the actually measured line speed is visible at all times.

Intervention is possible at any time, allowing you to reduce unnecessary losses. FASTEC 4 PRO helps you to identify weak points in the value chain and to derive optimization measures.

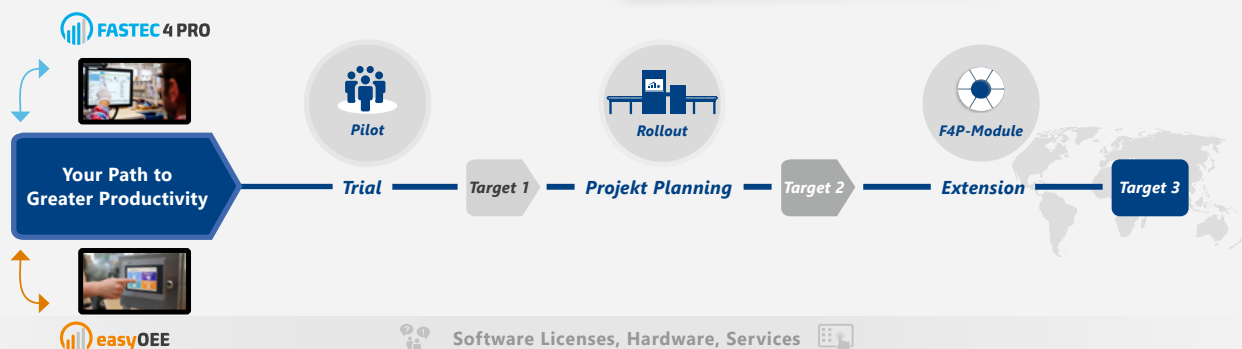


Sustainable Optimization: FASTEC 4 PRO

With our FASTEC 4 PRO software, you are choosing a tried and tested solution to optimize your entire production. The modular FASTEC 4 PRO is the IT system on the shop floor level and establishes the connection between the technically oriented processes there and the business processes on the management level. Building on the basic module, all FASTEC 4 PRO modules can be combined according to your requirements. The individual modules access a common and uniform database. This way you have data in real time, there are no interfaces between the modules and therefore no double data storage. Due to the modular structure, a step-by-step and demand-oriented implementation of the software modules covering all areas up to a digitalization of your complete production at one or more locations is possible.

Your benefits

- Fast and easy entry into digital production
- Autonomous system without influencing the system control and product quality
- Live monitoring: Transparent digital data in real time, intervention is possible at any time
- Sustainable optimization of production processes



Software Licenses, Hardware, Services



Efficient and Error-Free Production Planning

Professional planning of production and planned orders is the most important basis for your optimized production. This is the only way you can, for example, meet delivery dates, reduce throughput times, lower production costs and at the same time react flexibly to changes in plans. The FASTEC 4 PRO module Detailed Scheduling supports your planners in coping with these complex requirements with convenient functions for efficient and error-free production planning. It consists of several tools that save you a lot of time compared to planning methods using spreadsheets or planning boards.

For example, frequent changeovers are required for format and article changes. The FASTEC 4 PRO module Detailed Scheduling supports with functions such as cleaning matrices and set-up rules to keep an eye on these maintenance times and to plan the set-up in an optimized manner. For this purpose, production orders and batches are combined into campaigns/planning groups and the requirements of multi-stage production, with idle times during production, are taken into account.

This partially automated scheduling gives your planners the flexibility they need to act individually and safely – and they are significantly relieved of their day-to-day decision-making processes.

With the FASTEC 4 PRO module Detailed Scheduling, you also receive a uniform production plan that can be distributed digitally at any time. Live data from production allows you to react to unexpected events in real time. There is no intervention in validated processes, which is why the introduction of Detailed Scheduling means that no revalidation is necessary.



Excerpt of Some Functions

- ✓ Assign orders and operations to workstations using drag & drop
- ✓ Automatic checking and listing of individually definable rule violations, e.g. sequences, dates, capacities ...
- ✓ Uncomplicated early or late scheduling
- ✓ Visualizations of the order progress and the machine states in real time
- ✓ Evaluations and dashboards that provide information on the current status of production and facilitate readjustment in the event of deviations from the plan
- ✓ Effects of changed plans on other orders
- ✓ Consideration of idle and waiting times between work operations and production runs
- ✓ Consideration of required capacities for the processing of the work operations
- ✓ Adaptive resource visibility:
When manually scheduling an operation, only designated resources are displayed
- ✓ Dynamic calculation of the set-up time depending on the sequence of operations
- ✓ Grouping of production orders and batches into campaigns/planning groups

Your Benefits

- Multi-resource planning taking into account dependencies
- Complementary personnel, operating resources and material availability planning
- Consistent transparency throughout the entire planning process, detect bottlenecks at an early stage, detect spare capacities
- Uniform production plan that can be distributed digitally at any time
- Live data from production allows you to react to unexpected events in real time
- Relief through an executable and error-free production planning



Satisfied Customers Are Our Decisive Factor for Success

Heraeus

"Visualizing capacities that were previously only roughly estimated has helped us enormously. In 2016, the OEE of individual lines was increased by a total of 10-15 % within one year."

This concerns not only processes which record a strong increase in production anyway, such as new product launches, but also 'mature' processes in which tasks and processes have been going on for a long time and are thus carried out routinely."

Dr. Britta Bär

Head of Production, Heraeus Medical GmbH

MEDICE

"For us, this transparency led to further reductions in downtime and a high level of acceptance of the system among our employees."

"We already had good experience with easyOEE and FASTEC. It was therefore logical to also implement the MES system from FASTEC. Especially since we were able to gradually integrate the individual areas of our production due to the modular structure of the FASTEC 4 PRO MES system."

Belal Al-Shaibani

Process Manager, MEDICE Arzneimittel Pütter GmbH & Co. KG

BAUSCH+Health

"More than 10 years of positive experience with FASTEC 4 PRO in two plants have assured us of the global rollout."

"With the FASTEC 4 PRO tool, we were able to analyze where we were losing productivity and implement appropriate improvements accordingly. In this way we achieved a ROI within 12 months."

Sven Katzky

EMEA Director Operation Excellence & Lean, Bausch Health

You Will Find Our Detailed User Reports in Our Download Area

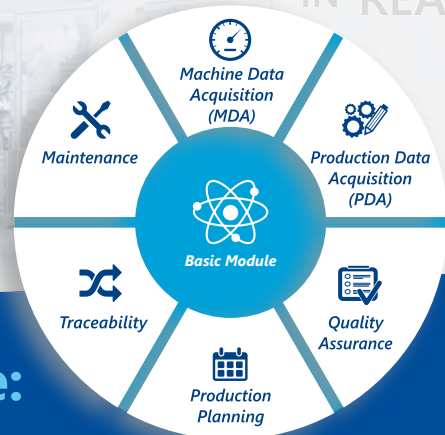
Our software is used in more than 330 companies from various industries in over 20 countries – including numerous well-known customers from the pharmaceutical industry. Our highly qualified and dedicated employees have been committed to optimizing production processes since 1995. We have broad industry knowledge and a great deal of expertise in the field of automation.



We will be happy to advise you personally.



TRANSPARENCY
IN REAL TIME



Who We Are:

Digitalization Specialist

We develop software solutions for production companies in the pharmaceutical, medical technology and cosmetics industries. Since 1995, we have implemented a wide range of successful projects. These include many different productions, industries and countries.

Pioneers

New technological standards are influencing manufacturing companies. We prepare ourselves and our customers for complex topics that will find their way into production in a few years. This is the only way we can actively shape your and our future.

Partners on Equal Terms

In-depth knowledge combined with over 25 years of experience and acknowledged industry expertise speak for future-oriented project implementation from a single source. We will professionally install our self-developed software for you. As a partner, we are at your side throughout the entire project and offer experienced support.

Would You Like to Learn More?

In person:
Information
material:

We will be happy to advise you – on site and via the web.

Webinars:

In our download area you will find numerous user reports from our customers and brochures about our software solutions.

Our employees provide detailed insights into our solutions. In our ON-SITE webinars, you will experience FASTEC 4 PRO from our customers' perspective.

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