

Productivity Measuring Device easyOEE



Brilliantly simple – simply helpful





What is easyOEE?

easyOEE is a complete system that is quick and easy to install to record and evaluate the productivity of individual machines, lines, plants and assembly workstations online from the PC workstation.

easyOEE provides you with permanent real-time monitoring of your machine, which allows you to react immediately to malfunctions, downtimes, performance and quality losses and noticeably increase machine productivity. At the same time, you can enhance further optimization potential thanks to the detailed evaluations from easyOEE, making easyOEE ideal for safeguarding your MES project. It provides you with meaningful evaluations for your investment decision – ready to use, easy to operate and unbeatable prices thanks to the possibility of renting it.

How Does easyOEE Work?

easyOEE only requires a clock signal from the machine. This cycle corresponds to a production cycle, so that a cycle of the filling machine is measured, to give a concrete example. It is either read out directly by the controller or generated by a light barrier when a product passes through it. easyOEE counts these automatically and measures the time between two cycles. From this, the currently produced number of pieces and the actual cycle time are calculated. If there is no cycle, the system changes from the "Production" state to the "Unfounded interruption" state. The machine operator can

now qualify this still unfounded state directly at the easyOEE terminal via touch input with stored reasons for downtimes.

When the machine starts up again, easyOEE automatically switches back to the „Production“ state, calculates the exact downtime and saves it. The recorded status data can additionally be linked to order data such as order number and article.

Important key figures are displayed directly to the machine operator in an overview screen. In addition, the operator can use another input mask to enter (reject) part quantities. The data collected by easyOEE can be displayed in real time via a web browser and conveniently evaluated in graphical form. A drop in performance, the occurrence of predefined states or the exceeding of downtimes can trigger alarms that are sent by e-mail.

Even older machines can be integrated without any problems, as easyOEE is connected via digital signals.

easyOEE – The Fast and Easy Entry Into Digital Manufacturing





Fast Analysis of Machine Productivity

Many entrepreneurs are hardly aware of how much optimization potential remains unused in their production, for example due to short downtimes or inaccurate data. This is due to a lack of transparency in production. The available figures often do not allow any conclusions to be drawn about the existing potential.

The productivity of a machine can be mapped quickly, easily and, above all, precisely with just one key figure – the OEE value. The basic idea here is a simple formula that provides precise information about how productive a machine or assembly workstation is.

Our OEE measuring device provides you with exactly this key figure – regardless of the machine type and manufacturer. You receive transparency and reliable data. easyOEE is delivered to you as a ready-to-use system. It is a plug-and-play complete system that is quick and easy to install and therefore, it is ready to use right out of the box. You do not need any additional hardware or software components. Getting started is possible at any time. Quite simply by remote access.



Ready for Use
Within 48 Hours

Outstanding Cost/Benefit Ratio: The Highlights of easyOEE

- ✓ Cost-effective and fast entry into the world of OEE
- ✓ For rent to ensure a fast Return of Investment (RoI)
- ✓ Pre-installed software on touch panel PC, to be configured individually
- ✓ No intervention in machine control required
- ✓ Starting machine monitoring within a very short time
- ✓ Short training period thanks to intuitively operable screen masks
- ✓ Permanent monitoring of the machine condition and display of the production key figures in real time
- ✓ Access anytime, anywhere from any PC or via web browser
- ✓ Detailed evaluations by order, article, shift
- ✓ Alerting function included
- ✓ Suitable for supporting a decision in favor of implementing MES

In Detail



Getting Started Quickly

easyOEE can be provided and installed within 48 hours. In addition, it hardly takes any training time.



Good Value

easyOEE is your cost-efficient introduction to the world of OEE. Benefit from our automated data acquisition and transparency.



Live Analysis

All recorded data can be evaluated directly and immediately at your PC workstation.



easyOEE – Functions in Detail 1/2

Everything at a Glance, Everything Under Control – Directly on the Machine

The easyOEE touchscreen enables monitoring, simple order registration, the entry of reasons for downtimes, and feedback of quantities and rejects. All data is automatically recorded, saved and logged in real time. This data can then be conveniently analyzed in detail in the web browser.

State Selection Including Free Text Entry

The machine operator can enter the reasons for downtime directly in the message screen with a fingertip. Machine downtimes can thus be comprehensively analyzed in terms of time, duration, cause, etc., and suitable measures can be derived to avoid them. By entering free text, the reasons for downtimes can be entered with a high level of detail. Free texts that have been entered once are available in the selection list for the next occurrence.

Alerting

Automatic notification by e-mail or optionally by SMS (associated with additional costs) in the event of malfunctions, timeouts, loss of performance, etc. are ideal for unmanned shifts and to be able to intervene immediately. This helps to reduce downtimes.

Online Monitoring

At a glance and in real time, wherever you are, you can view the machine status and customizable status information directly in the web browser. This includes article name, order number, target/actual cycle, target/actual quantity, availability, performance, quality, OEE or the timeline of the machine status.



Online monitoring in real time: Display of machine status and customizable status information, article name, order number, OEE, status timeline, etc. in the web browser.

easyOEE – the Live Ticker for Your Production!

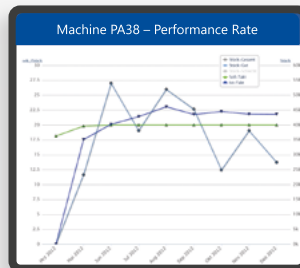
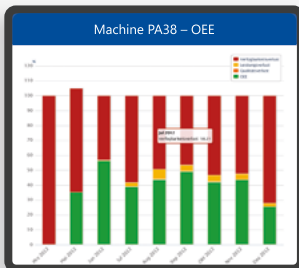
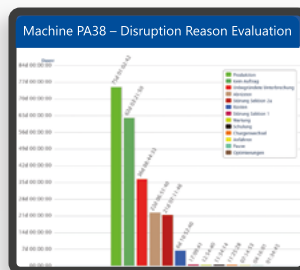
- ✓ **Precise:** Concise production key figures
- ✓ **Reliable:** Automatically recorded data
- ✓ **Exact:** Daily reports on availability, performance, failures, quantities, etc.
- ✓ **Flexible:** Customization (customer logo, company name, cost center ...)
- ✓ **Secure:** Three-level user administration (user, manager, administrator)
- ✓ **Focused:** Targeted evaluations
- ✓ **Immediate:** Immediate order confirmation
- ✓ **Fast:** Information via the web at any time
- ✓ **International:** Multilingualism
- ✓ **Tried and tested:** Printing of all evaluations and lists, export of evaluations in CSV format, possibility of data correction, manual feedback of good and bad parts (and/or automatic)



easyOEE – Functions in Detail 2/2

Web-Based Reporting

What are the most common reasons for downtimes? Could the efficiency of the machine be increased? How have quality and cycle times developed in the last month? Where can further optimization potential be increased?

Dynamic, web-based, graphical and tabular evaluations for fast and efficient detection of reasons for faults

These questions can be answered with the dynamic, web-based, graphical and tabular evaluations from easyOEE. All evaluations can be filtered and grouped so that, for example, reasons for downtime can be displayed according to frequency or duration, target and actual cycle times can be compared, produced quantities can be evaluated with the proportion of good/rejected parts, and OEE values can be analyzed with the partial key figures, namely availability, performance, and quality.

This makes it possible to identify reasons for downtimes as well as possible potential for improvement at a glance. Due to the permanent storage of the data in an SQL database, you can perform not only current evaluations but also evaluations of the past year, for example.

Configuration of easyOEE

You can adapt easyOEE to your individual production conditions in many ways. You choose whether you want to record shift-related or with reference to order and article. The configuration is done easily via your web browser. You decide which data you want to see. Thanks to the clearly structured and self-explanatory user interface, the various data for monitoring, MDA states, etc. can be configured quickly and easily:

- Target/actual quantities
- Order data
- Cycle times
- Operating time, downtime
- Shift, shift start, shift duration
- Actual performance (e.g. cycle time), target performance, average performance
- Current machine status and duration of this status

easyOEE enables you to store master data.

This master data forms the basis for recording and evaluations:

- Article including simple article import via Excel
- Shifts
- Targets for OEE, availability, performance, quality

Name	Color	Symbol	Input	Available
Headings			T:Besprechungen	Unoccupied time
Failure Kat2			T:Failure KTL	Downtime
No production			T:No production	Unoccupied time
Maintenance			T:Maintenance	Downtime
No goods			T:No goods	Downtime
Improvements			T:Optimierungen	Unoccupied time
Break			T:Pause	Unoccupied time
Production			C:30-NEU-Verknüpfung	Utilization time
Product jam			T:Produktbau	Downtime
Product changeover			T:Produktwechsel	Downtime
QS			T:QS	Downtime
Equip			T:Rüsten	Downtime
Failure Kat2			T:Störung Kat2	Downtime
Unfounded interruption			F:CAUSELESS_FAILURE	Downtime
Feeding belts			T:Zufuhränder	Downtime

Example for the configuration of states with different colors, symbols etc.



Why OEE?

Measuring Instead of Estimating – Your Gut Feeling Is Deceptive

- **Transparency With Figures, Data, Facts**

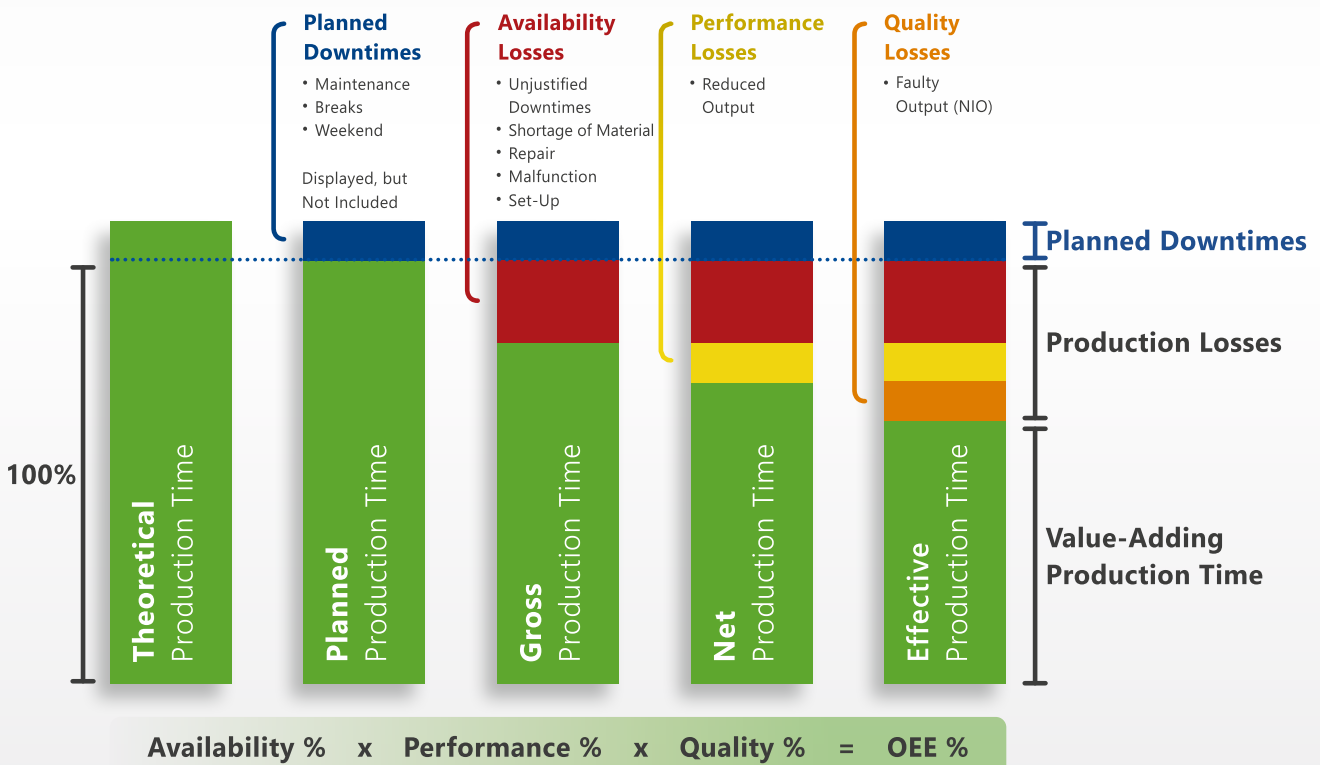
In many manufacturing companies, productivity is not yet measured systematically. Often, the number of units produced serves as an indirect indicator of productivity. If a certain number of pieces is reached in this scenario, e.g. per shift, this means that the production has run satisfactorily and vice versa.

However, producing according to gut feeling is not an exact method, because gut feeling is at best suitable for comparison: If things are running as they always have, everything is running smoothly; if there is a deviation, this indicates a need for intervention. But: Only what can be measured can be permanently improved. With the help of OEE the productivity of a company can be increased without great costs. OEE can thus make a significant contribution to increasing margins. More output in the same time at the same operating costs as well as less stress in production due to fewer disruptions are motivating arguments to deal with the topic of OEE.

- **What's at the Bottom of OEE?**

OEE (Overall Equipment Effectiveness) is a key figure for assessing productivity in manufacturing companies. Their automated recording can be implemented with relatively little effort and then enables real-time monitoring of productivity. With the OEE value, all plant losses can be systematically identified, analyzed and subsequently eliminated.

The OEE value is the product of **availability**, **performance** and **quality** level. The calculation of the OEE value thus includes losses due to unplanned downtimes, deviations from the planned number of units, and defective parts and parts that need to be reviewed. The OEE value is a central key figure for evaluating the productivity of a machine, plant or line. The abbreviation OEE stands for "Overall Equipment Effectiveness."





Experience of Our Customers



"We didn't know exactly what availability and performance our lines brought. We therefore started with the productivity measuring device easyOEE to perform a status quo analysis on three machines in packaging. Thanks to easyOEE, we were able to increase our OEE value on these three machines by up to 11% in the very first month.

Building on this, the MES system FASTEC 4 PRO was then introduced, which uncovered further capacity reserves and brought another 10% increase in OEE in the first year of operation."

Belal Al-Shaibani
Process Manager
MEDICE Arzneimittel
Pütter GmbH & Co. KG



"About a year ago, we had an OEE of 35% and we currently reach 60%. We can now react to disturbances in production on time thanks to the transparency achieved, thus we can also plan in advance much better – hectic rushes are a thing of the past.

If something unusual happens in production, we are able to react immediately and in a targeted manner. In addition, everything is logged in detail and documented so that it can be evaluated, in this way we can achieve constant process optimization with regular evaluations."

Dirk Kirchner
Production Manager
VION Convenience GmbH



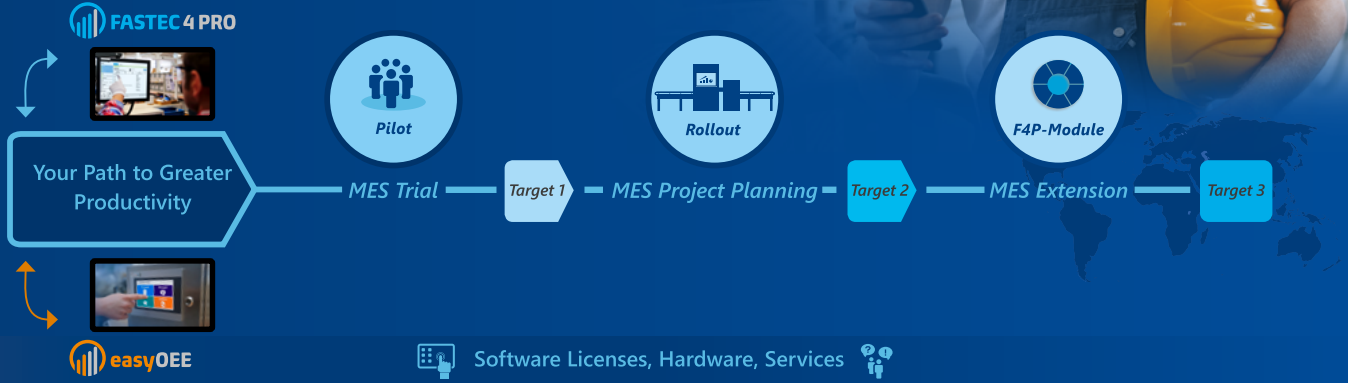
"The setting up of the easyOEE terminal in advance and the installation on site was successfully completed in a very short time and was almost self-explanatory. The import of the article master data from the ERP system was also carried out quickly and smoothly in order to avoid parallel master data maintenance. Through the additional connection of a simple hand scanner, the process data such as article number and process order number are read in by the employee, thus preventing input errors.

All in all, a very fast and cost-effective way to address and drive the topic of OEE in the company."

Marcus Bruns
Group IT Manager
Gustav Berning GmbH & Co. KG



Future Prospects Your Path to the Digital Factory



Step 1 | MES Trial With easyOEE

At the beginning, it is important to gain experience with digital data acquisition. The accuracy of previously manually recorded data is put to the test and compared with the semi-automatic data recording of easyOEE. In this way you can discover optimization potential and raise awareness among your employees. The resulting increases in OEE or productivity back up the commercial decision to expand digital data acquisition with an MES.

Step 2 | MES Project Planning

The requirements of the entire plant can then be analyzed based on the data obtained. With our modular MES software solution FASTEC 4 PRO, you can systematically network your production, record machine and operating data completely

and view it in real time. This enables you to better plan capacities and to optimize production processes, which results in increased capacities or cost savings.

Step 3 | MES Extension

Once the machine and production data acquisition (MDA, PDA) has been rolled out, further modules and functions can be easily added to the software. Due to the modular structure, a step-by-step and demand-oriented implementation of the software modules up to an all-embracing digitalization of your entire production at one or more locations, in one or more languages is possible.

We will be pleased to advise you personally!

Our sales department will be happy to provide you with user reports and information material!
Or simply make an appointment for a presentation at your location, in our company or via the web.

Of course, you can also experience easyOEE and FASTEC 4 PRO in action with our customers.

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