



Seeing beyond

## Customer Success Story

Gerresheimer AG



# Handle Challenging Quality Requirements in Medical Plastics with Responsibility

The medical plastics sector is highly intensive in nature, since the mass production of a wide range of parts means that there is always plenty to do in the measuring lab. Manufacturers like Gerresheimer make products such as injector pens that are vital to quality of life and must therefore be produced and handled with great sensitivity.

Given the need to ensure total peace of mind, the production requirements in the medical plastics sector can be challenging. Since high throughput leads to limited measuring time, ZEISS has invested significantly in boosting performance through software functions.



*A medical device may comprise a variety of plastic components, each of which must undergo a rigorous testing process. (Example image)*

## Committed partnership for optimized performance

Keen to further the performance of its optical and tactile systems, implement even more efficient measurement programs, and cut its measuring times by around 50%, the pharmaceutical product manufacturer Gerresheimer AG has formed an intensive partnership with ZEISS. This fruitful collaboration has secured a string of benefits for both parties. It has also inspired numerous innovations, such as the development of new hardware and software as well as software optimizations within ZEISS CALYPSO and the operating system.



*The Gerresheimer test lab:  
large-scale production, top-level measurement capacity.*

# ZEISS Solutions Reduce Gerresheimer Measuring Times by Around 50%

## The challenge:

### Supercharging performance while halving measuring times

High-throughput mass production processes at Gerresheimer require large numbers of fast and precise measurements on a wide variety of parts. The company therefore saw the need to optimize its performance, simplify its quality processes, and integrate new software functionalities. This in turn would reduce measuring times by around 50% and ensure measurability for added flexibility.

This standardization based on the ZEISS portfolio was aimed at generating greater efficiency along the Gerresheimer production chain. By establishing a standard with the ZEISS O-INSPECT, Gerresheimer could ensure that any optimization of this machine would directly benefit its operations on a global level. And with regard to additional steps such as the current integration of ZEISS PiWeb reporting and analysis software for traceable results, close collaboration between Gerresheimer and ZEISS once again promised to deliver.



## The partnership:

### Mutual benefits unlock fresh potential

Once Gerresheimer’s highly intensive production processes had exhausted the potential of standard solutions, ZEISS took up the challenge and worked proactively to meet the exceptional needs within this branch of industry. Members of the ZEISS board promoted efforts to establish a wide-ranging agreement between the two companies, with Gerresheimer committing to exclusively using ZEISS CMMs as a major statement of confidence. For Oliver Burgel, Global Executive VP Operations Procurement HR & Quality MDS (EVP) at Gerresheimer, this represents “a partnership in which constant cooperation, dialog, and the pursuit of progress result in innovation.”

This close interaction enables ZEISS to directly implement customer feedback – particularly in the development of its own products – and maintain a strong focus on customer benefits. Gerresheimer enjoys advantages such as direct customer support, on-site employee training within Germany, and in-depth consulting. It is also intimately involved in the development of hardware and software functions and of components tailored to its specific needs. Aided by a constructive atmosphere that has helped both partners explore new potential, Gerresheimer achieved its desired 50% time saving on measurements within two years of the ZEISS project launch.

“ *A partnership in which constant cooperation, dialog, and the pursuit of progress result in innovation.*” **Oliver Burgel, EVP**

## The solution:

### Integrated innovations tailored to the needs of medical plastics manufacturing

The partners began by exploring the optimization potential of the current measuring strategy and current ZEISS CALYPSO inspection plans. For example, a joint redesign of a ZEISS CALYPSO inspection plan and fixture for one specific part instantly cut Gerresheimer’s iteration loops in half: The newly developed and simpler fixture concept enabled these parts to perform each measurement from the same position without any adjustment.

However, the scope of this collaboration has also extended to the development of all-new innovations. With Gerresheimer requiring a more flexible probe rack, which is a familiar demand in the sector, the partners worked together to craft a dual-level and height-adjustable solution. Enabling greater capacity and supporting the goal of ensuring measurability on all devices, this probe magazine made its global debut at Gerresheimer and will be added to the

standard ZEISS catalog – demonstrating how all ZEISS customers stand to benefit from this partnership.

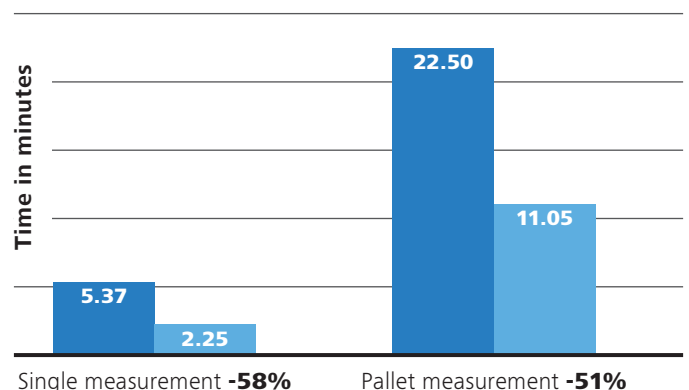
### Software for traceable reports

Software support has been key to the partnership, with ZEISS providing extra live training and fast-track hotline assistance in order to meet Gerresheimer’s highly intensive workflow requirements. The company has succeeded in implementing the new functionalities of ZEISS CALYPSO for optimized time performance and dynamic planning. Dedicated training has helped employees quickly master the highly intuitive ZEISS PiWeb software. ZEISS also handled the software reconfiguration that was necessary for Gerresheimer to deploy the GUARDUS MES platform at all its sites, thereby guaranteeing regulatory compliance and ensuring that all software is both compatible and up to date.



Joint development of a dual-level, height-adjustable probe rack incl. Fencilim

### Performance boost on O-INSPECT CMM



Validation of new device

■ Two fixtures (original)   ■ One fixture (optimized)

## The benefit:

### Standardization, optimization, and a very bright future

As Expert Quality Project at Gerresheimer, Thomas Kiener notes how this partnership is vital to establishing standardization “on all levels” within the company. Thanks to its commitment to ZEISS products, Gerresheimer now enjoys greater performance, expanded software capabilities, a considerably simplified manufacturer portfolio, and of course measuring times slashed by up to half.

The future is extremely promising for these partners, who have identified additional potential for extending their collaboration into areas such as CT, microscopy, and technical cleanliness. For Gerresheimer, the fundamental goal is to establish a single basis for its global operations – and with the support of ZEISS, it is well on the way to doing just that.

### How Gerresheimer succeeds with ZEISS solutions:

- Broad portfolio and support enables standardization centered on ZEISS products
- Around 50% cut in measuring times via new CALYPSO functions and dedicated user training for better programming
- Software development, support, training, and integration of GUARDUS MES
- Received world-first installation of new probe rack – now available to all as standard product



## Optimized Performance with New Features at ZEISS O-INSPECT

### Fast single point detection

ZEISS understands that there is always demand for greater production speed together with increasing need for efficiency and productivity. That's why we developed a new option in ZEISS CALYPSO for fast single point detection.

- Shortened measurement time for features with ZVP
- Up to 25% faster (depending on measurement strategy)
- Easy assignment in inspection plan, no need for complex programming

### Regular updates, greater functionality

With a recent ZEISS CALYPSO software release ZEISS once again has delivered a significant boost to quality control performance. Not only does this generate additional time and cost savings in component inspection and analysis, automation optimization also plays a major role in this new software version.

- New optical functions for increased accuracy and faster measurement

- ZEISS CALYPSO pallet optimizer software option reduces the number of sensor and stylus-system changes during a pallet measurement. Time savings of 20–30% are possible.
- ZEISS CALYPSO dynamic planning software option enables dynamization of the inspection severity. Quality control is thus optimized for production. ZEISS CALYPSO dynamic planning generates the sequence of parts to be inspected and adjusts the scope of measurement based on rules from MES/CAQ solutions or ZEISS PiWeb software.
- Optical measurement time optimization of up to 270%
- The optical distortion correction feature in ZEISS CALYPSO increases the accuracy of optical systems. A significant increase in accuracy is particularly noticeable in the peripheral areas. The smaller magnifications that can be used as a result increase the “Field of View”. This means that more geometry elements can be captured in the image at the same time. Depending on the measurement task and the required tolerance, this reduces the necessary number of measurement images and at the same time saves measurement time.

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## Company Profile

Gerresheimer is the global partner for pharmaceuticals, biotech, healthcare, and cosmetics with a very broad product range for pharmaceutical and cosmetic packaging solutions and drug delivery systems. The company is an innovative solution provider from concept to delivery of the end product. Gerresheimer achieves its ambitious goals through a high level of innovative strength, industrial competence and concentration on quality and customer focus. In developing innovative and sustainable solutions, Gerresheimer relies on a comprehensive international network with numerous innovation and production centers in Europe, America and Asia. Gerresheimer produces close to its customers worldwide with around 11,000 employees and generated annual revenues in 2022 of EUR 1.8bn. With its products and solutions, Gerresheimer plays an essential role in people's health and well-being.

**gerresheimer**  
innovating for a better life

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