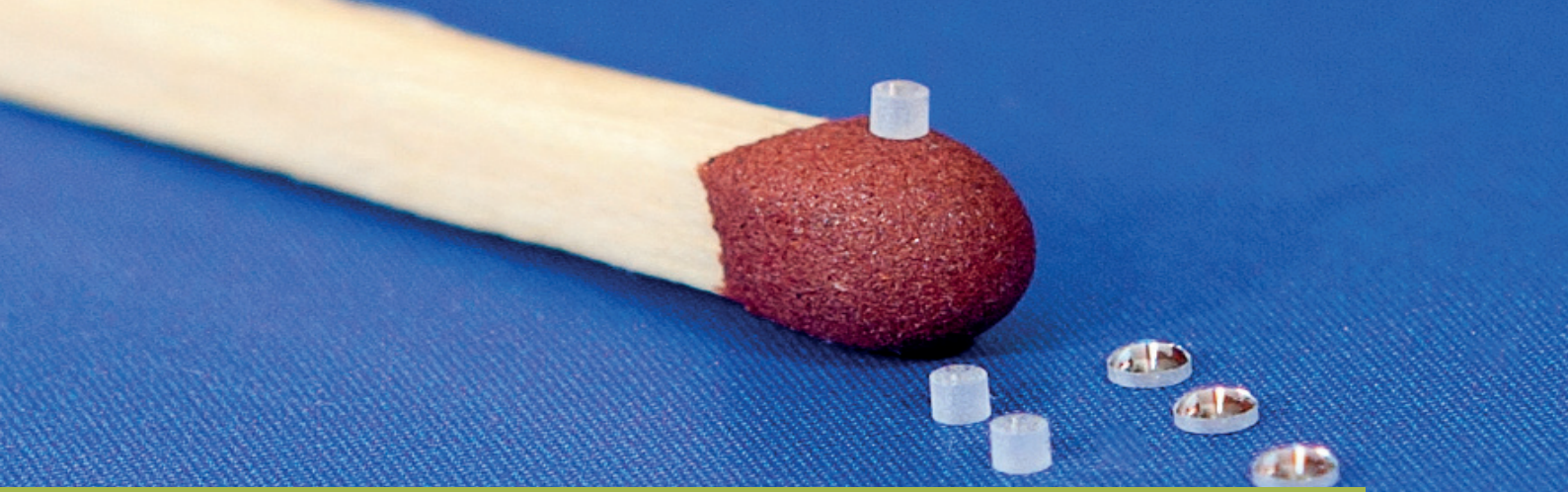

Mikrop AG

High Tech and Precision in the Smallest Space

Electronics & High Tech, Optical Industry

Name:
Mikrop AG

Website:
www.mikrop.com

Products and Technologies:
Micro-optics, high-precision optical systems and assemblies for medical and technical applications

Locations:
Wittenbach near St. Gallen, CH
Kac near Novi Sad, SRB
Sauerlach near Munich, DE

Revenue:
approx. CHFr 15 million

Employees:
approx. 160

proALPHA customer since:
2009

Focus on:
Advanced Planning and Scheduling
Plant data collection

Highlights

- ERP solution with focus on production planning and control
- Cross-border division of labor thanks to fully mirrored master files, parts and BOMs are identical for both companies
- Optimization based on a growing data pool from plant data collection
- Planned: ERP-supported parts labeling based on pick lists

Mikrop AG in Wittenbach near St. Gallen in Switzerland develops, produces and assembles highly complex optical systems. The company specializes in spherical lenses, miniaturized rod lenses, optical multi-element systems and compact assemblies with diameters ranging from 0.3 mm to 15 mm. The precision optics are used in medical technology applications and for industrial image processing, for example in the automotive industry or for checking aircraft engines.

The micro-optics industry demands absolute precision. This depends strongly on the processing tools used. Tool production is thus just as important to manufacturers as the product design itself. Both takes place at Mikrop AG in its home country Switzerland. Since becoming a subsidiary of German INDUS-Holding AG, large parts of the company's production have been outsourced to a location in Serbia. In order for this division of labor to work, Mikrop AG has been relying on proALPHA ERP and its strengths in cross-border production planning and control since 2009.

mikrop

PROALPHA

"Our growth – that is the volume and complexity of the orders we process each day – could never have been displayed without proALPHA ERP."

Roger Kugler, Head of ERP Mikrop AG

ERP solution for a division of labor in the value-added chain across locations

The management founded a production subsidiary in Serbia in 2007 to increase competitiveness since Switzerland is one of the top high-wage countries in Europe. Starting out as little more than a simple garage business, the Serbian branch is now larger than the headquarters in Switzerland. Mikrop AG currently employs around 70 people in Wittenbach. The new plant built in 2017 in Kac near Novi Sad has about 80 employees on a production area of 1,700 square meters - with plenty of room for expansion, given that the Serbian plant could be easily expanded if necessary.

The company covers the entire range of services: from optics design, development, production and assembly to functional checks for high-precision micro-optics. However, that was not always the case. "In the first decades of our company's history, we focused exclusively on the manufacturing of optical subsystems for medical endoscopy," reports Roger Kugler, head of ERP at Mikrop AG, and explains: "Back then, we only supplied a handful of customers. This involved high dependency risks." Today, the company is positioned much more broadly - both in terms of the number of customers and the range of industries.

"Nowadays, we complete orders for 20 to 30 customers simultaneously. Our customers operate in medical technology, the automotive industry and various sectors of endoscope-based quality control, among other industries," says Kugler. The services for these customers range from classic supplier production to the production of micro-optical complete systems, for which the company is responsible from development to final quality assurance. "The fact that we are able to offer this wide range of services by combining the competencies of two locations is mainly thanks to proALPHA, since both locations are connected to the ERP system. It is the central data hub and our cross-site information platform – especially for production planning and control."

Data hub in production control

All customer sales start in Switzerland. At the location in Wittenbach, for example, the required glass qualities for a requested optical system are determined and ordered, the geometries of the lenses are calculated, and the grinding and processing tools are manufactured. "Order planning and routing are then completely run by the optimizer of our proALPHA ERP in Switzerland," says Kugler.

A special feature at Mikrop AG is that the master files stored in the Swiss company as well as all order and production data including all parts lists and BOMs are mirrored one-to-one to the Serbian ERP company. "During the optimization process, we work with our own number ranges: all order operations located in Switzerland are stored in the ERP with three- or four-digit numbers. Tasks that take place at the location in Serbia are assigned five-digit numbers," explains Kugler. As soon as an order has completely passed the optimization process in Switzerland and has been released for production, the ERP system filters out all operations stored with five-digit numbers, bundles

them into a separate work order and transmits the order to the Serbian site.

Thereby, the system automatically adds the Serbian hourly rates and production costs to the bundled work order. This enables a complex, smoothly functioning interaction between the two Mikrop locations actually becomes possible. "One thing you have to know," says Kugler, "is that all materials and tools are purchased or produced in Switzerland." The production is made possible by multiple deliveries from Switzerland to Serbia per week. Once production starts, the ERP system automatically posts the quantities, times and costs, and mirrors this data back to the company in Wittenbach. This keeps all data up-to-date at both locations. This is important, for example, to be able to efficiently create the customs and commercial invoices required for the exchange of materials and parts between locations. Then, the partial products from Serbia are returned to Switzerland for final assembly, quality check and delivery to the customer.

Detailed plant data collection for purposeful optimization

The cross-site data exchange and ERP-supported advanced planning and scheduling, the optimization with proALPHA ERP, is enormously valuable for the company for many reasons. Unlike enterprises that produce mechanical parts in large lot sizes, Mikrop AG has to deal with comparatively small orders in terms of quantities and with an extremely demanding raw material. "Not all glass is the same," says Kugler. The chemical composition of the processed optical glasses is highly variable. Same applies to the geometries produced by Mikrop. In practice, this leads to comparatively high scrap rates.

"We are usually faced with 10 to 30 percent of calculated scrap," says Kugler and adds: "Regardless of how high the production lot sizes are, the calculated scrap is always a factor of uncertainty." It complicates planning, order processing and costing. It is essential to take appropriate measures by collecting a wide range of plant data. "That's why," says Kugler, "we use proALPHA ERP to record all material, personnel and production costs for each order - including the costs for tool production and for all small parts and consumption materials used." This has lead to a huge

data pool over time. proALPHA ERP uses this data pool for optimization and makes a significant contribution to more targeted order planning. "Without the support of the ERP solution," says Kugler, "we wouldn't be able to manage the large number of orders we're dealing with today, or be able to process them with economic success."

The potential is far from being exhausted

In fact, Mikrop AG has grown continuously since implementing proALPHA ERP in 2009. "For us, proALPHA ERP has been the key to improve our resource planning and organization, and thus our continuous growth," says Kugler looking positively into the future: "And that will remain so in the future."

The further expansion plans are ambitious. For example, parts labeling: previously, the miniaturized components at Mikrop were labeled by hand. This was time-consuming and error-prone. Since the implementation of proALPHA, labels are generated much more efficiently by using report printing. Specific labeling requests cannot be covered by the company using this approach. Therefore, the objective is now to implement the ERP system so that the customer-specific labeling requests can be extracted and applied to the label directly from the pick list. Plans are in full swing, which means that Mikrop AG and proALPHA will soon reach the next milestone in their joint development history.

"The collaboration with proALPHA runs smoothly, professionally and very efficiently. This applies to everyday work and also to the last release upgrade. We were able to work efficiently from the very first hour. That's how it is supposed to be!"

Roger Kugler, Head of ERP Mikrop AG

This is ensured not least by the good cooperation between the partners, both professionally and personally. proALPHA is represented in Switzerland by its own team of experts. "We appreciate this proximity and the competent support from our contacts at proALPHA," says Kugler, "especially since the results are convincing." This is reflected in the everyday work and whenever it matters, for example, during the last upgrade in 2018. The switch to proALPHA version 6.2 was perfectly prepared and completed smoothly. Everything worked exactly as before – from the start.

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