

operations<sup>1</sup>



# *Zünd Systemtechnik* **Success Story**

The leading Swiss manufacturer of cutting systems increases efficiency and quality in assembly with Operations1

# About Zünd Systemtechnik AG

Zünd is a leading Swiss manufacturer of modular cutting systems for cutting a wide variety of materials. The independent family business was founded in 1984 and is now managed by the second generation at the Altstätten headquarters (Switzerland).

With over 500 employees (worldwide) and 13 subsidiaries, the globally active company is clearly committed to its Swiss values: maximum precision in mechanical engineering, extremely reliable production systems and sustainable production.

The multifunctional cutting solutions are used worldwide in a wide range of applications.

Zünd manufactures around 1,000 cutters a year and serves with its highly precise and durable digital systems industries such as advertising technology, packaging, leather, textiles, upholstery, furniture and composites.

The company is committed to a modular system design: Customers can put together their own individual plant from a broad portfolio of modules.

ALTSTÄTTEN  
Switzerland





## Challenge: variant diversity and increasing complexity

Besides the plan to digitalize the company end-to-end, Zünd was confronted with an increasing number of variants and the complexity of its systems, which could no longer be managed with a paper-based process. With the help of the Operations1 platform, the technology company has succeeded in digitizing its production

processes end-to-end. This goes far beyond the mere digital provision of digital documents. Employees are guided intuitively through the processes and documentation, which significantly increases efficiency, transparency and quality.

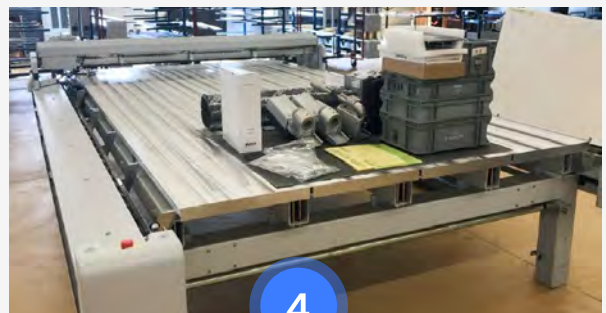
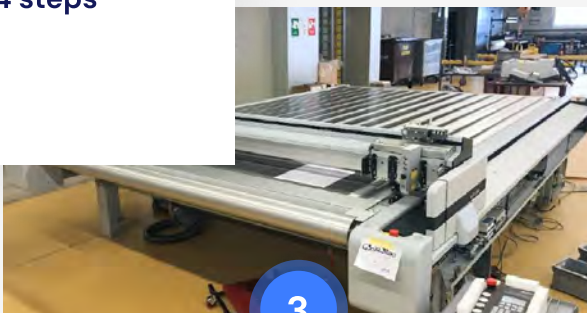
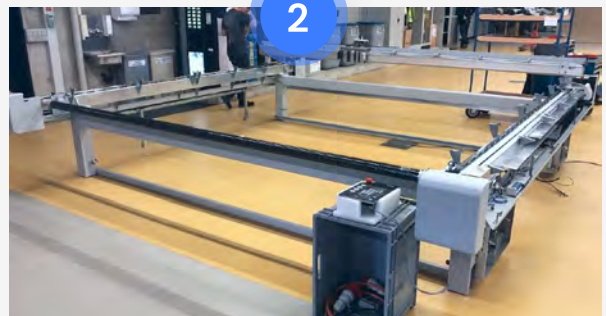


## The assembly process at Zünd

In addition to standard systems, Zünd also offers its customers custom-made products. By focusing on a modular design, every customer can put together the plant of their choice from various components. The systems are assembled at Zünd, while the required components are manufactured and delivered by regional partners within a

maximum radius of 35 kilometers. In Zünd's incoming goods department ①, the parts are inspected and checked for correctness and completeness. This is followed by the basic assembly ② of the feet and side elements. It must be ensured that the parts are mounted at right angles within a specified tolerance.

The Zünd  
production process  
along 4 steps



The process at a glance: Incoming goods, basic installation, assembly and shipping preparation



During the assembly of the vacuum table, the bars and the control unit, many measurement points ③ are made with regard to electrical safety, electrical cabling, positioning accuracy of the process, oscillation of the entire system, etc. If these settings are correct, the system is prepared for ④ dispatch. Various components are provided for the customer and the acceptance protocols are compiled for dispatch.

All four steps – incoming goods, basic installation, assembly, shipping preparation – were previously mapped at Zünd in a paper-based process with Excel lists and printouts in folders.

The increasing complexity due to the variety of combinations of different machine types and market segments pushed this handling to its limits, so Zünd looked for a new, better digital solution.

### Challenges in the paper-based process

- Wide variety of combinations of different machine types and market segments
- Low scalability of the paper-based process
- Increasing customer requirements with regard to documentation quality
- High effort for document management in quality assurance

## Limits of the paper-based process



### Quality assurance

The paper-based process was no longer scalable under the increasing requirements and led to a situation where individual process steps were skipped or short-cut by employees, resulting in errors and quality problems that later had to be resolved by the service technicians at the customer's facility.



### Increasing documentation requirements

The more complex the plant, the more important it becomes for customers to have correct documentation of all assembly processes, including measurement data on the positioning accuracy of the blades. The manual compilation of all relevant data became increasingly time-consuming.



### Efficiency in assembly and documentation

Paper documents had to be compiled individually depending on the customer order and variant-specific tasks had to be crossed out or completed. In order to be able to issue warranty certificates and ensure serial number management, handwritten notes on paper sometimes had to be entered manually into the ERP system. The potential for increasing efficiency through digitization was clearly obvious here.



### Updating documents

The assembly instructions for the various series models were provided to the almost 50 assembly technicians in folders.

When updates were made to the documents, these had to be printed out, sorted and filed 50 times – an extremely time-consuming and error-prone process.



### Onboarding

In times of a shortage of skilled workers, the induction of new employees into the processes must be accelerated and improved so that they can work productively as quickly as possible. Instead of paper chaos, a stringent, transparent process was urgently needed.





"Excel is certainly good and useful software, but it's not really suitable for digitizing the shopfloor. The wide range of variants and the increasing complexity of our plants could no longer be mapped in a paper-based process. With Operations1, we now have a complete digital solution that has significantly improved our assembly processes thanks to intuitive instructions and checklists as well as integration with our ERP system."

Markus Hölzl  
Global CIO  
Zünd Systemtechnik AG

- ✓ Increasing quality and reducing the error rate
- ✓ Increase customer satisfaction through excellent quality documentation
- ✓ Faster training of new employees in assembly
- ✓ Simplification of documentation (creation, updating, versioning, provision)
- ✓ Increasing efficiency
- ✓ Faster traceability of serial numbers in service

## Decision for Operations1

When analyzing and comparing providers in the search for a suitable digital shopfloor solution, Zünd was particularly impressed by the simplicity of Operations1 and the intuitive user guidance.

The fact that the focus is on the employees, that they are guided pragmatically through the instructions and that only minimal training is required were decisive criteria for Zünd.

The Operations1 platform provides a cloud solution that not only offers a high level of security, but also significantly reduces the internal maintenance and servicing effort required for the company's limited IT resources.

In addition, Zünd sees opportunities and advantages in benefiting from future updates, optimizations and new functionalities of the cloud solution. Thanks to the REST APIs provided by Operations1, data transfer to and from the ERP system is quick and uncomplicated.

Easy to use ✓

✓ Intuitive checklists

Wide range of functions ✓

✓ Cloud solution

REST API for data exchange  
with the ERP system ✓

✓ Very little in-house IT expertise  
required at Zünd

Dynamic and  
competent team ✓

✓ Short time-to-market  
and high flexibility



## Project steps and implementation



"Thanks to the dynamic and competent Operations1 team, we were able to implement the solution quickly and smoothly. In the initial discussions, the team very quickly conducted a convincing analysis of our current situation and found exactly the right answers to our challenges."

Markus Hölzl  
Global CIO  
*Zünd Systemtechnik AG*

### As-is process analysis and target process design

The Operations1 team gained an overview on site in order to better understand the world of Zünd and the customer's current situation. In a presentation, Zünd was given a complete overview of the Operations1 software, its basic functionalities and possibilities. A target process was then developed together.

### Organization of the structure and content

Together, the structure class elements from the ERP system (product categories, departments, etc.), which can be assigned to the orders and which serve to categorize and systematize the content, were considered in order to import the content into Operations1 via mass upload or active interface. The first documents were created in Operations1 for test purposes.

### Connection to the ERP system

Together, an integration concept was developed to transfer data from the ERP system Sage b7 to the Operations1 software for further processing and mapping, and to send information such as serial numbers and measured values back to the leading system.



### End-to-end digitization of the information flow in live operations

The data feed comes from Sage b7 and is based on the bill of materials so that variant-specific orders can be created that contain meta information such as customer name, start date, due date etc. from the ERP system.

Work instructions and checklists within the order are automatically created in Operations1 based on the bill of materials. If a component matches an asset, the required document is added directly to the order. This means that employees only receive the information they really need to complete the job and can work more efficiently thanks to intuitive digital assembly instructions or inspection checklists with videos and images.

As soon as employees start working on the content, Operations1 automatically generates a report that fully documents all work steps. At the end, these report data records are returned to Sage b7, stored in the system history and also made available to the customer.



## The results: higher efficiency, better quality



### Time savings in searching and tracking

Whereas it used to take around 25 minutes per system to manually enter the serial numbers of all installed components, this is now much quicker thanks to direct scanning via the digital work instruction system. The preparation of documentation for customers has also been significantly optimized thanks to the digitalized process: Around 30 minutes are now saved per customer installation.



### Improved traceability and transparency

In Operations1, it is possible to track exactly which plant was assembled with which version of the assembly instructions.

In addition, serial numbers are now recorded error-free in the system. This means that valuable information is directly available, particularly in service cases. In addition, the software now provides all those involved in assembly and supervisors with a complete real-time overview of the production status of a plant in the assembly process at all times.



### Quality assurance through higher process reliability

Updated assembly instructions are now immediately available digitally. It used to take at least 15 minutes a day to distribute the updated instructions to the technicians. Thanks to the clear, order-specific work instructions, there are also far fewer questions from the workers.



### Easy onboarding

The easy-to-understand and clear digital work instructions and assembly checklists make it easier and faster to train new employees.

### The results at a glance

- ✓ Time savings in the documentation process
- ✓ Quality assurance through higher process reliability
- ✓ Increased traceability and transparency
- ✓ Reduced paper consumption in production
- ✓ Easy training of new employees



"The software is simple and self-explanatory. After a short training period, the employees – even the initial sceptics – recognized the benefits themselves and are now using the solution intensively."

Michael Zahnd  
Quality Assurance  
Zünd Systemtechnik AG

## High degree of software utilization

Today, Zünd can no longer imagine a time without Operations<sup>1</sup>. More than 1/3 of the employees at the Altstätten site work with the software every day. Up to 300 reports are completed daily for individual process steps in the assembly and dispatch process.

The solution has been so well received by employees that the company is currently carrying out further rollouts in incoming goods inspection, material monitoring and initial sampling.



"In Operations<sup>1</sup>, our employees receive customized orders with variant-specific work instructions including mandatory checkpoints. This gives them more simplicity and security in assembly and documentation and also increases the quality standard of our plants."

Jürg Oggenfuss  
Team Lead Quality Assurance  
Zünd Systemtechnik AG

**+10%P**

ADDITIONAL  
INCREASE IN  
DELIVERY QUALITY  
THROUGH  
MANDATORY  
CHECKPOINTS

**50 Min**

TIME SAVINGS  
PER WEEK IN  
RESEARCHING  
AND TRACKING  
ASSEMBLY STEPS

**30 Min**

TIME SAVINGS PER  
CUSTOMER DOCUMENTATION  
THROUGH AUTOMATIC  
REPORT GENERATION



operations<sup>1</sup>

# Operational Excellence on the shopfloor

With Operations1, your employee-led processes become more secure, efficient and transparent. Increase your productivity, reduce error rates and optimize your operational processes flexibly and continuously.



Do you have any further questions?

Contact us!

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