



Smart Factory Assembly

A digital assembly solution for Hydraulic and
Pneumatic System manufacturers

CHALLENGES FOR HYDRAULIC AND PNEUMATIC SYSTEM MANUFACTURERS

Six challenges in your Shop floor

Smart Factory Assembly, applied to Hydraulic and Pneumatic assembly processes, optimizes process control, ensuring the highest quality and leveraging the digital transformation of assembly by digitizing work instructions, tool interactions and data traceability.

This solution can help you overcome the following six challenges on your shop floor by improving productivity without compromising on quality.

We help you to solve the following challenges in your assembly process...



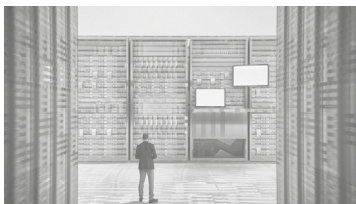
The use of analog tools, which must be adjusted manually by the assembler, is eliminated.



Replace paper-based work instructions with up-to-date digital instructions



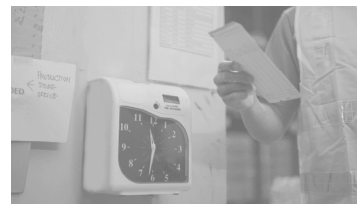
Agile employees onboarding with best practice processes.



Easier management of variations in the assembly lines.



Automated quality control eliminates subjectivity and manual checklist filling.



Full transparency and traceability in your assembly operations.



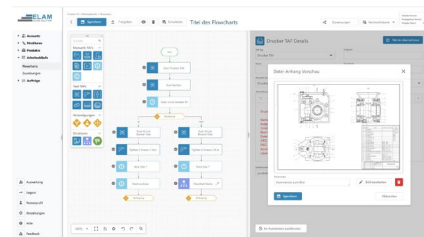
"Ensuring process reliability, traceability and increasing productivity without compromising process and production quality. The requirements in hydraulic and pneumatic assembly have faced a significant change in the recent years due to the increased demand and to the higher complexity of the products. This has set structural changes and the framework conditions for both, management and employees at assembly workstations to improve the handling of complexity of devices and processes."

SMART FACTORY ASSEMBLY

Smart Factory Assembly Solution

Smart Work instructions

Design your interactive workflows including instructions, checklists etc.



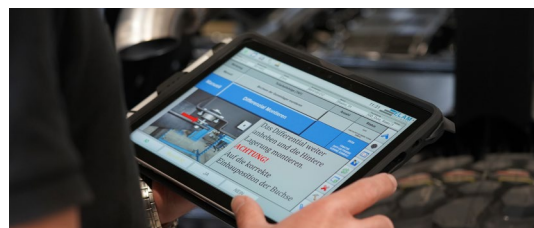
Connected equipment

Integrate any device and tool that improves your quality and productivity.



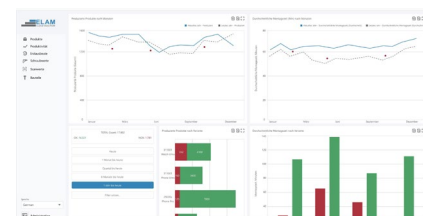
Assisting the operator

Easily modify the amount of content your employees need to view based on their experience levels and the product.



Customized dashboards

Track your data and improve your processes.



Combine work and material flow

Pick-To-Light helps to guide the process and automatically order new stock when needed.



"Intelligent solutions are needed that simplify the work and ultimately ensure optimal process control in manual assembly. It's about assured quality, the necessary flexibility, maximum transparency and the highest possible level of automation."

USE CASE

Increase product quality with an assembly guiding solution

We have as a customer, one of the world's largest manufacturers of hydraulic system blocks in Denmark. The collaboration with Bossard began with the acquisition of a digital workplace to test whether or not the technology could be used as a global standard for digitizing assembly. After a successful pilot test, the company is extending the solution across the entire production plant and its business units.

Challenge

The customer's products are quite complex with a high level of quality. Despite the established lean assembly processes, errors have occurred over and over again, leading to a high number of reworkings due to difficult accessibility.

1. Workers forget to put all material in the hydraulic block and quality test does not detect that.
2. A-class torque values need to be tracked and stored.
3. Rework leads to long cycle time and unexpected delay in shipment.
4. Provide end customer with documentation that everything has been installed in accordance with the assembly instructions.

Solution

With 10 digitally connected workstations, the production process can be tracked and specific assembly steps can be controlled in real-time. The operator receives all the necessary assembly information based on their experience and background.

In addition, the connected Pick-To-Light solution prevents workers from forgetting parts during the final quality inspection. The connected smart tools also document A-class tightening and the process-related information is stored in a central production map of the item.

Outcome

With Smart Factory Assembly, our customer has achieved the following key benefits;

1. Rework reduced by 80%.
2. Enables economical production of small batch sizes.
3. Operators can produce any product with best-in-class processes.
4. Remote changes to documents across all factories

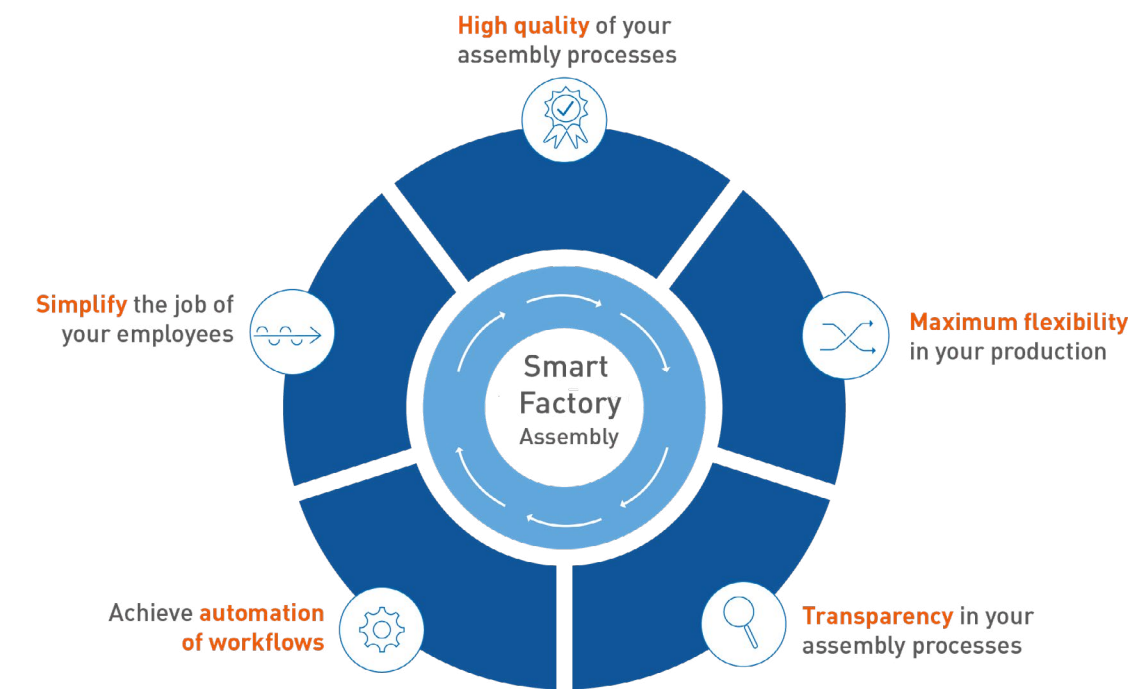
Do you also want to take advantage of our Smart Factory Assembly expertise?

Let us find the best solution for your company

[Learn more about the Use Case](#)



Summary and Benefits



Quality

Automated quality control in the assembly process through the use of connected tools.

Process automation

Automated data collection and workflow automation to avoid human errors.

Simplify

Everyone can assembly even the most complex products thanks to visual instructions and continuous quality control with connected tools and devices.

Flexibility

Facilitates the transition of workers and the onboarding of new employees, even for complex products thanks to visual instructions.

Transparency & Traceability

Automated tracking of production helps meet customer requirements and speed up entire process.