



## When Precision Determines Feasibility

Concept, development, assembly and delivery of a multifunctional handling system enabling the precise and safe final assembly of highly sensitive components.

**Customer:** AIRBUS Operations GmbH, Hamburg

**Industry:** Aerospace, hydrogen technology, precision assembly systems

### Task:

In the context of highly sensitive components and future-oriented aerospace technologies, the requirement was to provide a handling system that would reliably enable delicate, precise and safe working steps in final assembly. Existing approaches did not meet the required standards in terms of control, sensitivity and process reliability.

### My contribution:

- Concept, development and delivery of a multifunctional handling system for highly sensitive assembly processes.
- Focus on the precise, safe and controlled execution of delicate working steps in final assembly.

### The challenge was to:

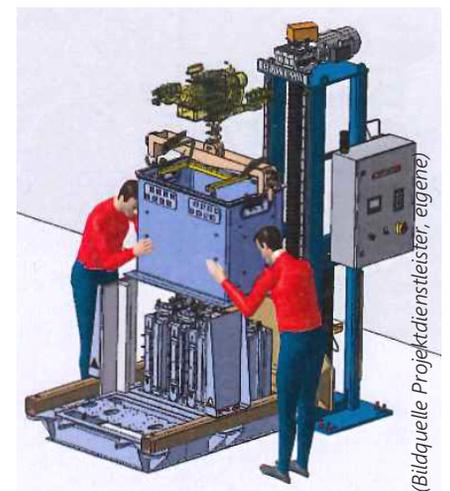
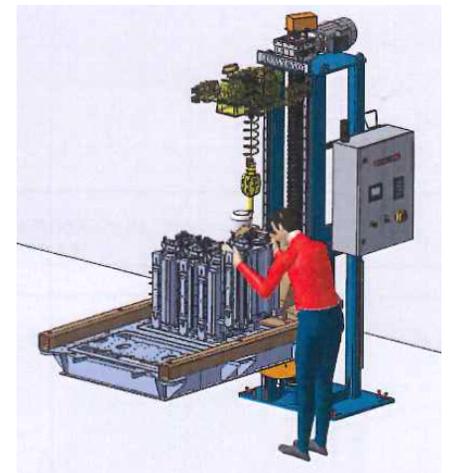
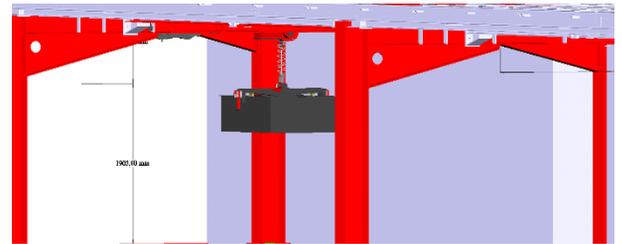
- Ensure maximum precision and control when handling highly sensitive components.
- Enable safe and delicate work sequences in final assembly.
- Address the requirements arising from the context of ZEROe and hydrogen technology.
- Combine flexibility, process reliability and practical feasibility.

### My contribution to the solution and to the project's success:

- Resolution of a project situation that was initially unclear in its objectives.
- Creation of direct OEM-level access at the working level.
- Shift of my role from information supplier to technical sparring partner.
- Presentation and validation of the solution before an interdisciplinary panel of 20 stakeholders.
- Establishment of the concept as a reference for the specification sheet, including grip and endeffector concepts as well as crane and motion structures.
- End-to-end project management through to on-site implementation.
- Identification of suitable implementation partners, including technical coordination and recommendation.
- Material flow and assembly processes.

### Key Achievements:

- Transformation of an unclear request into a structured and technically robust overall concept.
- Positioning as a direct point of contact at OEM level.
- Definition of a handling standard within a strategic project (hydrogen in aerospace).
- Influence on the design of an entire production line beyond the actual solution itself.
- Establishment of a solid foundation for industrial implementation.



(Bildquelle: Projektarbeiten, eigene)