



# endeco System Engineering and Consulting – With a Plan!



At endeco, an engineering team of experts from the starch, milk, and milling industry develops and plans your customized production system for powdered or liquid media. We know exactly what to look for when it comes to developing future-proof production facilities.

Benefit from our expertise in analyzing and implementing measures for your existing or your new process plant.

Our team has many years of experience and provides in-depth expertise in finding solutions along all system design phases, from pre-engineering to detailed engineering. Project implementation included.

#### **Our main engineering focus:**

- Planning of new systems
- Modification of existing systems
- Incorporation of individual components
- Process optimization
- Verification of economic viability, productivity, and material flow
- Business development planning



**Engineering your  
system from A to Z.**



endeco  
engineering · design · construction



# Setting the Course for Success: Professional System Engineering from the Start



**endeco Engineering and Consulting is the foundation for optimally implementing your system – from an economic, technical, and organizational perspective.**

## **endeco basic and design planning**

endeco already accompanies its customers during the early project phases of process and system planning.

- Concept and description of the project idea
- Concept design for system verification and building dimensions for technical feasibility
- Evaluation of economical feasibility
- Assessment of the project idea in terms of approval and environmental relevance
- Rough cost estimate
- Resources planning
- Time and organizational planning
- Documentation and presentation of the results

## **Basic engineering / design planning**

In this phase, the results of the concept phase are implemented in the planning of the actual project.

- Pre-dimensioning of the systems and the components that are decisive for dimensioning
- Examination of alternatives
- Drawn representation with building dimensions, processing system, GMP zones, explosive zones, people and material flow
- Process descriptions, process flow chart with pre-dimensioning
- Formulation of operator and process requirements
- Line planning (pre-planning)
- Cleaning concept (if required)
- Equipment list / machine list / pipe list
- Automation concept (pre-planning)
- Mass and energy balances
- Cost estimating
- Time and organizational planning
- Creation of tendering documents
- Documentation and presentation of the results



### Detailed engineering / construction planning

The design of the overall system and its individual components are developed in close cooperation with the customer.

- Design planning based on the results of the preliminary stages
- Drawn representation with building dimensions, processing systems, GMP zones, explosive zones, people and material flow (continuation)
- Process descriptions (continuation), process flow chart with pipe dimensions (continuation)
- Function specifications
- Layout with building dimensions, processing systems, GMP zones, explosive zones, people and material flow (continuation)
- 3D models incl. material excerpts and reviews
- Production drawings for the entire plant (isometries with parts list, racks, platforms, special parts)
- Equipment list / machine list / pipe list / fittings list
- Software design specification
- Hardware design specification
- Mass and energy balances (continuation)

- Cost estimating
- Time and organizational planning
- Documentation and presentation of the results





# Project Implementation and Completion: Construction, Commissioning, and Documentation



We will be on it until you are up and running: endeco will be by your side until all trades undergo final acceptance, and we will monitor them from planning through assembly to commissioning.

## Support through to successful conclusion

- Assembly support
- Commissioning support and/or commissioning
- Time and organizational planning
- Budget monitoring
- Documentation of all trades and archiving of the project documentation

## Working for you: state-of-the-art engineering tools

endeco uses the most suitable tools and procedures:

- Reliable simulation for pneumatic conveyors and flow analyzes
- Machine and building drawings in 2D and 3D using ACAD and inventor
- Creation of flow diagrams and generation of isometries
- Creation of circuit diagrams via e-plan
- Tendering programs for construction
- Various programs for thermal protection calculations, building physics, truck minimum turning curves
- Risk analysis using certified software
- CE documentation and declaration

Get in touch with us – we would be glad to advise you.

