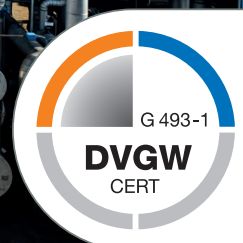


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# Scope of services

## Plant Engineering

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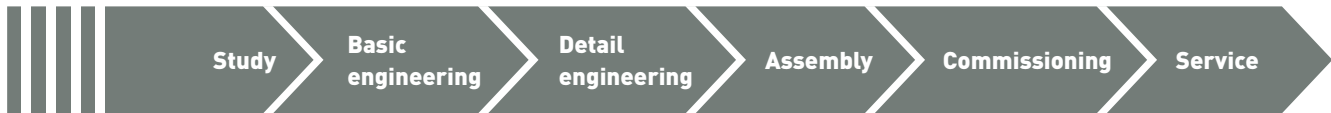




## Scope of services Plant Engineering

**Your competent partner as a detail or operational planner in the sectors chemicals and petrochemicals, refinery, food, energy, oil and gas.**

Whether it be plant availability, process efficiency or the introduction and optimisation of management systems, we have extensive expertise and provide our customers with such resources in a wide-ranging service package.



From planning only to large scale projects - by means of work packages we decide together whether your projects are realised jointly or completely independently.

Our 100 experienced employees (60% engineers and 35% technicians) work interdisciplinary at 7 locations to deliver projects in a structured and timely manner within a service or work contract. In order to provide you with holistic solutions, we collaborate closely with another 900 employees in the fields of E/I&C and PCT (please see also our brochure *Industrial Automation* for further information).

### 1. Project management

- Feasibility study, basic and detail engineering
- Project coordination
- Scheduling
- Specifications
- Cost estimation
- Controlling
- Claims management
- PMO
- Owners engineering

### 2. Process engineering

- Process development
- Sankey diagrams
- Process simulation
- HAZOP moderation
- Block, process, and process flow diagrams
- Quantity and mass balancing
- Approval planning
- Plant safety

### 3. E/I&C and process control technology

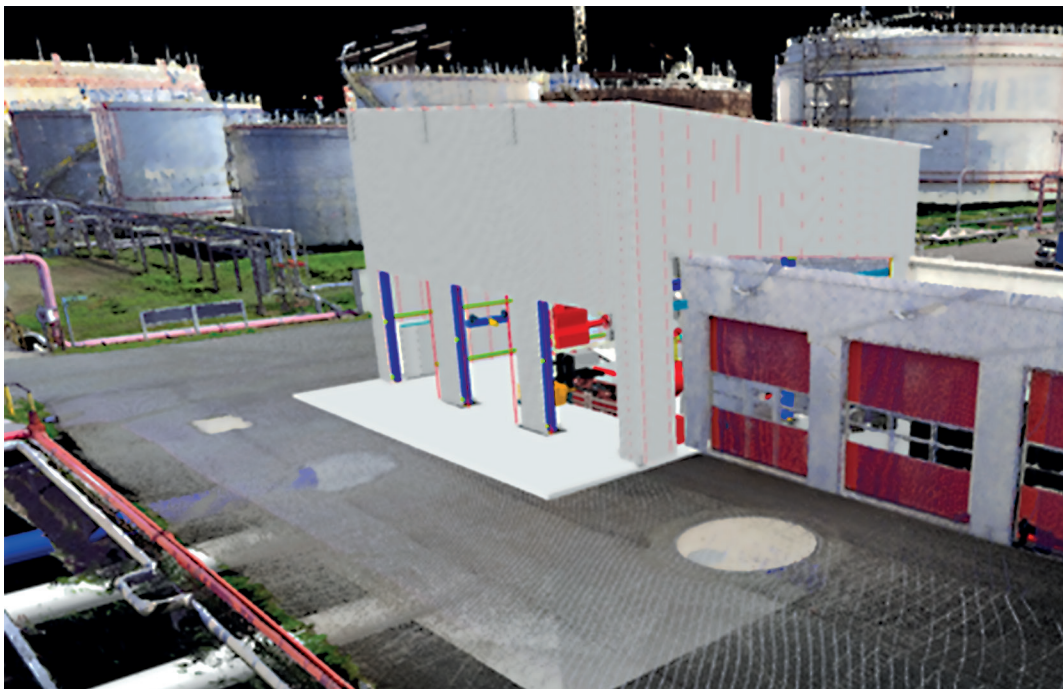
- ⚙ Planning (all engineering phases)
- ⚙ Specification of instrumentation devices and process control systems
- ⚙ Cable route planning
- ⚙ Loop checks
- ⚙ CAE documentation
- ⚙ Single-line diagrams
- ⚙ Function diagrams
- ⚙ SIL, Functional safety
- ⚙ Mechanical ex-protection
- ⚙ Control cabinet design and assembly
- ⚙ Power supply up to 20 kV
- ⚙ Full assembly

### 4. Rotating and static equipment

- ⚙ Design and dimensioning of apparatuses
- ⚙ Design and dimensioning of pressure generators
- ⚙ Compliance of specifications
- ⚙ FAT/SAT

### 5. Pipeline technology

- ⚙ 3D scanning, partial or full
- ⚙ As built
- ⚙ Layout planning
- ⚙ 3D layouts
- ⚙ Pipeline dimensioning
- ⚙ Calculation and creation of pipe classes
- ⚙ Pipeline planning 2D/3D
- ⚙ Isometrics
- ⚙ MTO
- ⚙ Pipe and bracket assembly



*(Original 3D-Scan)*



## 6. Construction technology

- Building planning
- Structural calculations
- Pre-dimensioning of pile foundation
- Foundation planning
- Steel work planning and assembly
- Workshop drawings
- Formwork and reinforcement drawings
- Planning according to WHG / AwSV
- BIM
- Permitting

## 7. Calculations

- Pipe stress calculations
- Meshed piping systems
- Safety mechanisms
- CFD simulations
- FEM calculations
- Component calculations
- Heat exchanger design
- SIL calculations

## 8. Construction management (CM)

- Creation of site org charts
- SiGeKo
- Workflow planning
- Constructability/feasibility
- Setting up site structure
- Turnaround management
- Specialist construction management
- Senior construction management
- Toolbox meeting
- Construction log
- Holistic site management
- Resource planning
- Coordination work scheduling
- Measuring evaluation
- As-built verification
- Review of planning documentation
- Supply

## 9. Tools

- ACRON
- AJ AVA
- Autodesk (all trades)
- Bentley (all trades)
- CFD
- COMOS PT
- CONVAL
- EPLAN P8
- FEM
- FERO
- HTRI
- MS Project
- Nastran
- PCS7
- PDS 3D
- Primavera
- ProDok
- ROHR2
- RSTAB
- SINETZ
- TIA-Portal
- WinCC
- WSCAD
- Wonderware IAS, Intouch

## 10. Types of contracts

- Service contract
- Work contract
- Temporary employment

## Always there when you need us

Customers can find Stadler + Schaaf representatives at numerous locations. You can get in touch with us directly at these locations.



We also service various different construction sites for our projects.

**Additional locations and further information can be found on our website:**





GROUP OF COMPANIES

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