

# KASAG



Plant  
Apparatus  
Pressure vessel  
construction

Experts for design, engineering and welding

We meet your requirements **globally**

# Swiss precision and quality from the Emmental for the global industrial market

**You are part of an environment in which product reliability and impeccable product quality enjoy top priority. You have to put full trust in your partners and put very great demands on them. This is what connects us, because we want customers who set very high standards.**

With KASAG Swiss AG as a partner for the design, engineering and construction of apparatuses, vessels, pressure vessels, reactors, filters, heat exchangers, modules and plants for global use, you are on the safe side.

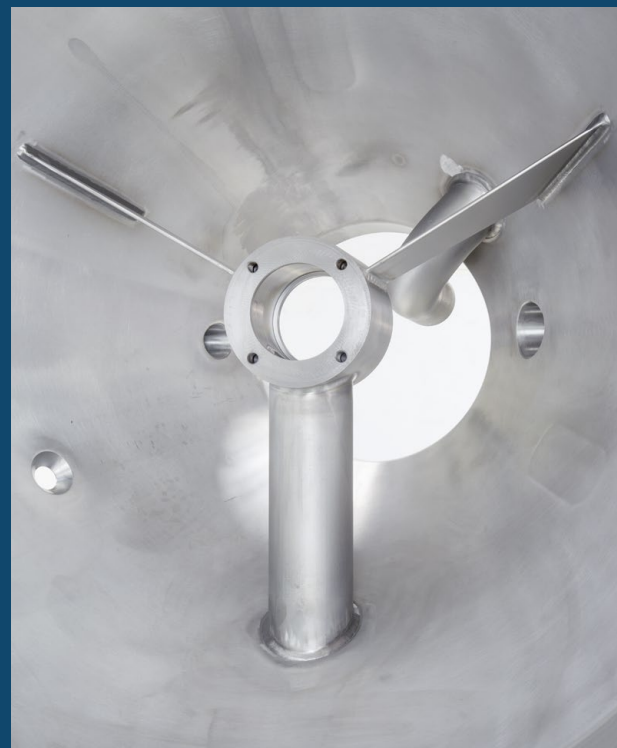
We are the experts for the welding of stainless steel and special materials such as Hastelloy and Duplex.

In close collaboration with our customers, we calculate and design plant components and systems for the chemical and pharmaceutical industry and for the fields of bio and food technology.

Decades of experience, well-founded expert knowledge, and a strong awareness of quality characterize our company as a competent partner.

KASAG is provided with a wide range of manufacturer approvals for the worldwide supply of pressure vessels, process equipment and plants.

Both the origin of the materials processed and the production steps are documented in detail and their traceability is always guaranteed. Furthermore we can offer almost all testing methods required in our organization.





## We offer a universal range of services

### **Product range**

Pressure vessels, reactors  
Apparatuses, pressure vessels for pharma, biotech  
Process vessels, storage tanks  
Plants, modules, components, skids, panels  
Filtration technology  
High-pressure apparatuses and plants  
Heat exchangers, evaporators, condensers  
Cryogenic vessels, cryogenic technology  
Nuclear technology  
Vacuum chambers, vacuum apparatuses  
Columns  
Transportation containers  
Welded constructions.

### **Machinery for object sizes**

Vessel diameter	up to Ø 4 m
Object weight	up to 13 t
Object length	up to 16 m

### **Certifications, manufacturer approvals**

ISO 9001 / ISO 3834-2  
PED (EN13445 / AD-2000)  
ASME (U-Stamp, Code Section VIII Div. 1)  
China Stamp (A1), China License  
TP TC 032/2013 (EAC), Customs Union  
In addition to our existing manufacturing approvals, we are able to perform the respective approval procedures for almost every country around the world (e.g. Singapore, Japan, Malaysia, Canada, etc.)

### **Engineering**

Strength calculation according to regulations  
FEM (finite element analysis) calculations  
Earthquake, wind loads and nozzle loads  
Constructive design, engineering, optimization, choice of material, surfaces  
Coordination with regulatory authorities  
Constructive implementation and bills of material  
CAD systems: Autodesk (AutoCAD 2D, Inventor 3D)

“In collaboration with our ambitious customers, we implement individual and complex projects in business fields ranging from chemicals, pharmaceuticals, biotech, cryogenic technology and nuclear technology with strong passion.”



#### **Additional services**

In addition to our existing activities, we design complete modules, components, skids, panels and plants. Furthermore we offer specific services. They include comprehensive engineering on the basis of specifications as well as P&I diagram for your apparatus and pressure vessels in 3D Inventor, including the pipeline routing required.

If required, we'll attend to the purchase management of the purchased parts for you, prepare the electrical and pneumatic wiring including control system, and implement comprehensive testing procedures.

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### **?** Do you have any questions?

If you have any general questions regarding offers and the construction of plants, apparatus, pressure vessels, our experts will be glad to assist you:

Phone +41 34 408 58 58  
sales@kasag.com

 [www.kasag.com/en/plant-apparatus-pressure-vessels-construction](http://www.kasag.com/en/plant-apparatus-pressure-vessels-construction)

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“The KASAG experts are among the global leaders in the fields of process engineering, design, engineering, and the construction of pressure vessels, apparatus and plants for industrial companies.”

#### **Materials**

Austenitic, stainless steel (1.4307, 1.4571, ...)  
Fully austenitic, stainless steel (1.4539, 1.4828, ...)  
Duplex (1.4462, 1.4410, ...)  
NiCrFeMo alloys with Ni > 40% (Inconel, Hastelloy, ...)  
Al – Mn and Mg alloys (AlMg 4.5 Mn)

#### **Surface treatment**

Pickling, passivation, oxygen cleaning  
Grinding, brushing  
Electrolytic polishing and glass bead blasting (external)

#### **Testing procedures**

X-rays RT  
Dye penetrant testing PT  
Visual inspection VT  
Material testing / Positive Material Identification PMI  
Helium leakage testing LT  
Riboflavin test  
Pressure tests of up to max. 1000 bar  
Surface roughness testing Ra/Rz  
Ferrit measurement Fe  
Wall thickness measurement  
Video endoscopy  
Pressure-loss test (liquid)

#### **Welding**

Our certified experts master the procedures of MIG, MAG, TIG, Plasma and Orbital welding. We exclusively use certified filler materials for carrying out our welding operations.



For technical exclusivity worldwide

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