

BINS AND SILOS

ENGINEERED BULK STORAGE SOLUTIONS

Project-Oriented Engineering,
Coordination and Turnkey
Storage Systems

COMPLEX STORAGE PROJECTS MADE SIMPLE

Simplifying technical complexity through structured coordination and integrated project execution.

INTEGRATED ENGINEERING & PROJECT MANAGEMENT

Aligning engineering, sourcing, manufacturing and logistics within one project framework.

RELIABLE EXECUTION FOR INDUSTRIAL APPLICATIONS

Delivering storage systems safely, efficiently and according to schedule.



FOREWORD

Bulk material storage projects are often approached as equipment supply projects: a required volume is defined, a vessel is selected, and manufacturing begins. In reality, successful storage solutions require a clear understanding of technical requirements, engineering decisions, manufacturing capabilities, logistics constraints and site conditions.

Modern industrial storage systems must be adapted to the characteristics of the stored material, operational requirements and available installation conditions. Achieving reliable performance requires not only high-quality manufacturing, but also structured engineering and close coordination between all parties involved.

Our role is to support customers throughout the storage vessel development process — from initial technical discussions and engineering clarification through design coordination, manufacturing support and delivery.

The customer provides the required material parameters and application requirements. Based on these inputs, we calculate, design and coordinate the production of suitable storage vessels, including silos and storage bunkers in different configurations such as round, rectangular or square designs.

By combining engineering expertise, practical experience and close cooperation with manufacturing partners, we deliver reliable storage solutions tailored to industrial applications.

Aleksandr Fedoseev

Senior Project Manager at qoncept engineering GmbH

PIONEERING TECHNOLOGIES

MAKING INTELLIGENT PRODUCTION A REALITY

Software and engineering solutions that increase process efficiency, optimize raw material use, and increase operator safety in steelmaking.

GLOBAL FOOTPRINT

15+

Software
Projects

5

Countries
Software

60+

Equipment
Projects

19

Countries
Equipment

40+

Consulting
Projects

9

Countries
Consulting

PRODUCT PORTFOLIO

SOFTWARE & HARDWARE

qontrol MAPS

Raw material management & charge optimization

qontrol L2

Level 2 automation & digital twins

qontrol MES

Manufacturing execution system

qontrol LMS

Ladle management system

curve AI

Operator terminals & camera systems

EQUIPMENT & DEVICES

qouplerG

Automatic gas coupling system

qouplerM

Patented multi-media coupler

qouplerD

Automatic slide gate coupling, globally unique

Bins & Silos

Complete industrial silo systems

Engineering Services

Custom mechanical design & revamps

CONSULTING & STUDIES

Metallurgical Process Consulting

Measurable improvements in melt shop operations

Digitalization & Software Strategy

Feasibility studies and transformation roadmaps

COMPANY HISTORY

2018



FOUNDATION

Founded in Leoben, Austria, by metallurgists with strong industrial backgrounds.

Establishment of the internal software architecture creating the scalable foundation for modular qontrol integration.

2020



MARKET READINESS – qouplerM & FIRST PRODUCT DEPLOYMENT

qouplerM, an automatic multimedia coupler, reached market readiness and was patented.

Implementation of the first productive scrap tracking system, marking the transition to operational digital steel production.

2022



PATENT AND FULL STEELMAKING INTEGRATION

Patent granted for the automatic slide gate coupling system qouplerD. This expanded the portfolio into automated slide gate actuation and signal integration.

Implementation of the first productive steel plan management system (Level 2) on full scope.

2024



NORTH AMERICAN EXPANSION & PLATFORM SCALING

Establishment of qoncept Americas Inc. to support North American customers.

Functional specialization of the qontrol platform with dedicated modules for heat optimization, ladle tracking, and advanced scrap yard management.

TODAY



100+ PROJECTS WORLDWIDE

Active operations across Europe, the Americas, and Asia.

CONTENTS



01

COMPLEX STORAGE.
ONE ENGINEERED
SOLUTION.
PAGE 5



06

BEYOND DELIVERY.
READY FOR
OPERATION.
PAGE 10



07

COMPLEXITY IS A FACT.
COMPLICATION IS NOT.
PAGE 11

01 COMPLEX STORAGE. ONE ENGINEERED SOLUTION..... 5

Tailored storage concepts based on material properties, site conditions, and custom engineering.

02 ENGINEERED RIGHT FROM THE START..... 6

Translating client parameters into a unified, fully coordinated bulk handling system.

03 WHERE PROJECT SUCCESS TAKES SHAPE..... 7

3D modelling and structural calculations to ensure efficient production and assembly.

04 ONE PROJECT. ONE PARTNER. ONE COMPLETE SOLUTION..... 8

Single-point project management aligning engineering, manufacturing, and logistics.

05 FROM DESIGN FREEZE TO DELIVERY..... 9

Detailed execution and complex heavy-cargo transport — demonstrated by our Austrian project.

06 BEYOND DELIVERY. READY FOR OPERATION..... 10

Reduced project risk, seamless integration, and reliable operation for any scale.

07 COMPLEXITY IS A FACT. COMPLICATION IS NOT..... 11

Structured coordination from day one ensures long-term industrial reliability.



01 COMPLEX STORAGE. ONE ENGINEERED SOLUTION.

Bulk material handling industries rely on dependable storage infrastructure to maintain stable production. Powders, granulates, minerals, biomass, recycled materials and other bulk products require storage solutions that are adapted to their specific characteristics.

Although storage systems may appear similar externally, each project has unique technical requirements. Material properties, required volume, available installation space, environmental conditions and operational requirements all influence the final storage concept.

Based on customer-provided parameters, we develop the appropriate storage solution and define the required vessel design. Important considerations include silo geometry, structural requirements, access solutions, maintenance requirements, insulation concepts, weighing technology and filling/discharge interfaces.

A successful storage project requires more than manufacturing capability. It requires a clear engineering approach and effective coordination between customers, engineering partners, manufacturers and suppliers.



Figure 1: Custom Fabrication of Industrial Bunkers.



02 ENGINEERED RIGHT FROM THE START

The development of a storage system begins with understanding the customer's requirements and translating them into a suitable technical solution.

The customer defines the required application parameters, including material characteristics, storage volume, operational requirements and installation conditions. Based on this information, we develop and coordinate the engineering concept for the required storage vessels.

Key technical considerations include:

- storage capacity and configuration
- silo or bunker geometry
- structural requirements
- weighing and monitoring systems
- insulation requirements
- access and maintenance structures
- filling and discharge connections
- transportation requirements

The challenge is to ensure that all elements are developed as one coordinated solution while considering engineering requirements, manufacturing possibilities and practical installation conditions.

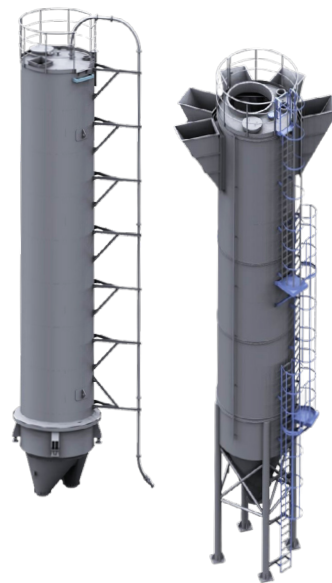


Figure 2: 3D Models Developed During the Engineering Phase, Supporting Technical Design, Review, and Project Coordination.



03 WHERE PROJECT SUCCESS TAKES SHAPE

Successful storage projects are based on clear technical alignment between the customer, engineering partners and manufacturing partners.

Using the customer's technical parameters as the foundation, we develop the engineering basis for the storage solution and coordinate the required design activities.

This includes:

- 3D modelling and layout development
- technical design reviews
- structural design and calculations
- storage vessel configuration
- integration of auxiliary components
- manufacturing considerations

The objective is to create a technically suitable design that can be efficiently manufactured, transported and installed.



Figure 3: Precision Welding for Durable Silo Construction



04 ONE PROJECT. ONE PARTNER. ONE COMPLETE SOLUTION.



Figure 4: Step by Step. From the First Section Welding to the 250m³ Silo Complete Assembly.

Based on the agreed technical requirements, the storage vessel solution is developed through coordinated engineering and manufacturing activities.

Our responsibility is to manage the development process and ensure that the required storage vessels are designed, manufactured and delivered according to customer requirements.

This includes coordination of:

- engineering activities
- manufacturing partners
- additional equipment suppliers
- logistics planning
- project communication

We act as the central coordination point between the customer and involved partners to ensure that technical decisions, production activities and delivery requirements remain aligned.

The result is a reliable storage solution based on customer-specific requirements and engineered design.



05 FROM DESIGN FREEZE TO DELIVERY

Following approval of the technical concept, the project moves into detailed engineering, manufacturing coordination and delivery preparation.

Implementation activities include:

- finalisation of manufacturing documentation
- manufacturing schedule coordination
- quality monitoring
- technical inspections
- logistics planning
- transport preparation

Large storage vessels often require specialised transport solutions. Oversized cargo dimensions, route limitations and delivery schedules must be considered during project planning.

A representative example of our project capability is the engineering coordination and delivery of a multi-silo storage installation for a steel manufacturing plant in Austria.

The project included:

- 7 silos
- silo volumes up to 250 m³
- oversized cargo transportation requirements
- transport dimensions including a track length of 38 metres
- total project duration of 11 months

The successful execution required close cooperation between the customer, engineering teams, manufacturing partners and transport providers.



06 BEYOND DELIVERY. READY FOR OPERATION.



Figure 5: Installation at Site. Additive Silo 90m³

A successful storage project is not only the delivery of fabricated vessels, but the creation of a reliable storage solution adapted to the customer's application.

Our approach provides:

Customer-specific engineering. Storage vessels designed according to actual material parameters and operational requirements.

Reduced project complexity. Engineering, manufacturing and logistics activities coordinated through one experienced partner.

Reliable technical integration. Storage vessels and required auxiliary components developed as one coordinated solution.

Flexible execution. Solutions ranging from individual storage vessels to complex multi-silo installations.

Our experience demonstrates that demanding industrial storage projects can be successfully delivered when engineering, manufacturing and coordination are managed together.



07 COMPLEXITY IS A FACT. COMPLICATION IS NOT.

Industrial storage projects are successful when customer requirements, engineering decisions and manufacturing capabilities are aligned from the beginning.

Our approach is based on close cooperation with customers and specialised partners. By combining engineering knowledge, practical experience and structured project coordination, we

support the development of reliable storage solutions for demanding industrial applications.

From initial discussions through engineering, manufacturing coordination and delivery, we provide customers with a clear and reliable partner for engineered bulk storage solutions.



Figure 6: Project "Landing". Successful Delivery.



challenge US

qoncept group

Waasenstraße 16
8700 Leoben, Austria

(+43) 3842 30 300
office@qoncept.at
www.qoncept.at



qoncept Americas Inc.

100 Corporate Center Drive
Coraopolis, PA 15108
United States of America

(+1) 412 286 9890
office@qoncept.us