

FORMWORK SYSTEMS

For axisymmetrical reinforced concrete structures



RSB
Formwork Technology

FORM FOLLOWS FUNCTION.

RSB Formwork Technology

Formwork systems for digesters and round tanks

Superior concrete surfaces

RSB is specialised in circular formwork systems for individual construction projects such as **digesters**, fermentation tanks and biogas reactors. For standard digesters, RSB offers its formwork that requires no through-wall ties for the funnel, cylindrical, conical and the flat roof section. As a leading supplier of **egg-shaped digesters**, RSB customers profit from the advantages of our high-quality formwork systems, such as large concreting sections for greater economy and construction quality.

- ✓ free of through-wall ties
- ✓ high dimensional accuracy
- ✓ cylindrical formwork: climbing without crane
- ✓ perfect surface quality
- ✓ easy assembly and disassembly
- ✓ integrated safety and work scaffolding
- ✓ 360° rotatable assembly ladder
- ✓ low concrete drop height
- ✓ excellent concrete compactability



Precision and safety

Our **cylindrical formwork** for structures with diameters up to 25 meters requires no through-wall ties and provides high dimensional accuracy, roundness, surface quality and easy handling. By using the circumferential and vertically movable work scaffolding from RSB, the formwork will be lifted into its position without a crane. Moreover, reinforcement and concreting work can be done from the platform. Cylindrical formwork will also be used for caissons, silos and shafts.

- ✓ free of through-wall ties
- ✓ formwork facing: steel, wood, or water-absorbing liner can be attached
- ✓ crane-independent climbing
- ✓ integrated safety and work scaffolding

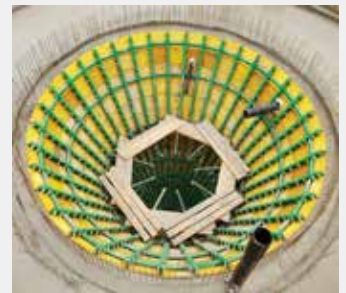
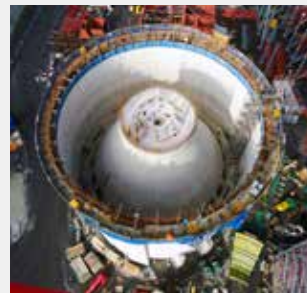
RSB **segment formwork** is easy to assemble and offers the best possible concrete surface quality.

- ✓ high dimensional accuracy and roundness
- ✓ dimensionally stable and robust
- ✓ tall wall heights can be realised
- ✓ all types of formwork liner are possible



RSB Formwork Technology

Formwork systems for water towers, cones and funnels



Highest requirements

Structures for **water towers** place extremely high demands on formwork technology. With the ideal combination of standardisation and individualisation, RSB systems offer a high level of efficiency. The cylindrical parts of central and main shaft will be built free of through-wall ties. The vertically movable work scaffolding from RSB enables the lifting of the formwork without a crane.

- ✓ free of through-wall ties
- ✓ high dimensional accuracy
- ✓ easy assembly and disassembly
- ✓ self-supporting inner and outer formwork
- ✓ no shoring needed
- ✓ integrated safety and work scaffolding
- ✓ rotatable assembly ladder
- ✓ low concrete drop height
- ✓ excellent concrete compactability
- ✓ perfect surface quality

Excellent quality

RSB formwork for **cone-shaped structures** uses a self-supporting steel skeleton that is distributing all loads directly into the cylindrical wall. The countering formwork enables a perfect concreting even of very steep cone structures, such as displacement cones in cement silos. RSB **funnel-shaped formwork** uses a self-supporting steel skeleton which is centrally secured against buoyant force. This design principle guarantees maximum stability and contour accuracy. The use of stiff concrete enables a high concrete strength and water tightness.

- ✓ free of through-wall ties
- ✓ self-supporting formwork system
- ✓ high dimensional accuracy
- ✓ easy assembly and disassembly
- ✓ integrated safety and work scaffolding
- ✓ rotatable assembly ladder
- ✓ low concrete drop height
- ✓ excellent concrete compactability
- ✓ perfect surface quality

FORM FOLLOWS FUNCTION.

RSB Formwork Technology

Formwork systems for tunnels and towers

Full-service provider

Whenever **tunnel formwork** for mining or cut and cover design is needed, RSB is the experienced complete solution provider for tunnel construction. The offer includes formwork technology, conception, planning, production and assembly as well as support by the RSB project manager. Additional services such as anchoring, concrete distributing and vibration systems complete our offer.

- ✓ easy operability
- ✓ high concrete raising speed
- ✓ short changeover times
- ✓ dimensionally stable
- ✓ remote controlled hydraulic functions
- ✓ complete on-site assembly
- ✓ low personnel expenses
- ✓ everything from a single source



Outstanding technology

RSB is the leading supplier for tower construction. The technically mature formwork meets the highest demands regarding statics, stability and function. The portfolio comprises **windmill towers** including work and safety platforms as well as **telecommunication** and **radar towers**. The formwork positioning system enables the casting of five-meter segments within daily cycles.

- ✓ free of through-wall ties
- ✓ high dimensional accuracy
- ✓ perfect surface quality
- ✓ easy assembly and disassembly
- ✓ time-saving positioning and setting up
- ✓ placing of reinforcement and inner formwork at the same time
- ✓ integrated safety and work scaffolding
- ✓ optimised construction times



FORM FOLLOWS FUNCTION.

RSB Formwork Technology

Formwork systems for special structures

Individual and complex projects

RSB offers **special structure systems** for complex projects with particular requirements such as domes, spheres, inlet structures, x-blocks, tetra-pods or gravity-based foundations for offshore windmill towers. Naturally, these construction projects demand more planning for the technical realisation as standard structures. Our customers benefit from the expertise and experience of our employees and appreciate our support during the construction phase of the project.

More than 4,500 realised objects worldwide

- ✓ custom-made formwork systems
- ✓ formwork systems without through-wall ties
- ✓ high dimensional accuracy
- ✓ easy assembly and disassembly
- ✓ integrated safety and work scaffolding
- ✓ longstanding experience
- ✓ approved formwork solutions
- ✓ optimised construction processes for serial production



FORM FOLLOWS FUNCTION.

FORMWORK SYSTEMS

Digesters, round tanks, water towers, cones, funnels, tunnels, towers and special structures

About RSB Formwork Technology

RSB has been a leading supplier of anchor-free, self-supporting formwork systems for axisymmetrical reinforced concrete structures since 1978. Our specialists design, optimise and fabricate formwork in-house for use in digesters, silos, water towers, shafts, funnels, displacement cones, tunnels and offshore foundations – as well as structures tailored to individual customer requirements. Inspired by our motto "FORM FOLLOWS FUNCTION." we develop the best possible formwork solution and support our customers during the entire construction process, from the design phase to realisation.

The specialist in anchor-free formwork systems

Using our anchor-free, self-supporting formwork conserves resources and ensures superior results for your project. The RSB working platform allows the cylindrical formwork to climb without using a crane. Another advantage: Reinforcement and concreting work can be done from the platform.

Added value from working with RSB

International customers in the construction industry value our skills as a complete solution provider. Our advice is not limited to formwork technology, and extends to project and personnel planning, design and assembly. Based on RSB's 35-year history, our employees are ready to contribute their expertise and experience to construction logistics, technical implementation, project management and coordination during every job. We synchronise the delivery of formwork materials to the site. The RSB construction schedule ensures on-time completion, keeping costs low.

Innovation based on research and development

The company is constantly investing in R&D, with new technologies and methods for reinforced concrete construction being developed and tested in-house. Our certified quality management system ensures ongoing improvement of company performance in the areas of system, process and product quality.

- ✓ RSB is a **full-service provider** for project and personnel planning, development, fabrication and assembly.
- ✓ Our customers benefit **worldwide** from our comprehensive **consulting and service portfolio**.
- ✓ System, process and product quality at RSB are certified and fulfil the **ISO quality standard**.
- ✓ **Individual and standard solutions**: our experts work with you to develop the best formwork solution.
- ✓ Our formwork systems are **free of through-wall ties**, offering optimum dimensional accuracy and smooth surfaces.
- ✓ Using the RSB working platform allows the anchor-free formwork to **climb without using a crane**.
- ✓ **Improved construction times** of your projects: construction schedule, on-site RSB construction superintendent and the project manager support you.
- ✓ The integrated **safety and working platform** keeps all workers on the construction site safe.
- ✓ The company is constantly investing in research and development and is considered a **market innovator**.