Quality right from the start
thyssenkrupp System Engineering is an operating business unit of the Automotive Technology segment of the thyssenkrupp AG, a system partner for all important components of the process chains car body and powertrain in automotive industry.

The product range also includes automation solutions for electrical storage and drive systems as well as solutions for innovative lightweight designs.
Testing solutions for powertrain

The product field of powertrain test is a part of our Division Battery & Testing Solutions. We supply engine, transmission and axle testing systems to automotive manufacturers and their component suppliers as well as for the new powertrain concepts for electric mobility.

Working together with our customers, we develop strategies and concepts for in-production quality monitoring. We build testing systems which are delivered and installed on a turnkey basis, all backed by our comprehensive service support after start of production.

We maintain our technology lead based on a constant stream of new developments. Our customers benefit from our professional project management and our extensive know-how in engineering and assembly techniques.
The satisfaction of our customers is our over-riding goal. It dictates the philosophy underlying our business: We believe in transparent, collaborative management, making optimum use of the skills and energies of our highly motivated workforce.

Focused closely on meeting the needs and expectations of our customers on a daily basis, we have developed a high level of service expertise. That approach enables us to offer high-precision and highly reliable products.

We work together with our customers and business partners in a true spirit of partnership and collaboration. Awareness of our social responsibilities and respect for the environment are attributes that underpin everything we do.

Our employees are allowed a high degree of autonomy to their work on their own initiative. This creates a climate in which innovative solutions emerge to give our customers a key competitive edge.
Conventional powertrain or alternative drive systems: We will provide you with the right solution to test your products - whether combustion engines, transmissions, axles, batteries, electric motors, fuel cells or hybrid systems. You will profit from our more than 30 years’ experience, our expert know-how and our extensive development capacities.

It was back in 1989 that Thyssen acquired Johann A. Krause Maschinenfabrik GmbH, a medium-sized business with high-end technical expertise.

Combining that SME structure and dynamism with the financial strength of a global concern has enabled the business to succeed at the highest international level.

thyssenkrupp System Engineering offers full-service general contractor expertise, featuring integrated quality and R&M management, extending from research, planning, development, design, production, and selection and monitoring of suppliers, through to service and after-sales support, to deliver proven benefits founded on a verifiable evidence.

Our products and competencies

Products:
- Cold test for engines
- Transmission test
- Energy store test
- Testing of components, including turbochargers, mechatronics units, clutches
- Complete test benches, with interconnections, setup stations, assembly, repair
- Component testing incorporating dimensional measurement, parts checking, leak-testing, valve lash adjustment
- Data acquisition, evaluation and management

Competencies:
- Simultaneous Engineering projects and mapping exercises for engines, gearboxes and components
- Planning and project management
- Production and commissioning
- Service and after-sales
Our product field of powertrain test employs over 250 people at its competence centers in Bremen and Langenhagen as well as at other manufacturing and service locations worldwide. Some 60% of the workforce are qualified engineers, and over 40% have been with the company for more than 15 years. We have delivered more than 650 testing systems to our customers worldwide since the mid 1980s.

Experience that brings rewards for you

With its high qualified, loyal workforce, thyssenkrupp System Engineering offers outstanding project management expertise allied to broad-ranging experience in engineering and process design. This additional experience is the assurance to our customers that you have chosen the right partner: thyssenkrupp System Engineering.
Ever shorter production series and model cycles, downsizing, production relocation - all these factors entail huge capital investment if machinery and plant is not able to adapt to market changes.

thyssenkrupp System Engineering works to modular standards, assuring greater flexibility while at the same time cutting cost. Tried and proven standardized elements are combined according to specific needs, so enabling existing lines to be modernized, extended or retooled quickly, easily and cost-effectively.

The modular manufacturing system delivers a product range which can be tailored in kit style to offer greater flexibility, enabling customers to make assured decisions in line with current market needs.

Our solutions

Variants:
- Manual to fully automated
- Prototypes up to large-scale mass production
- Small engines with 0.3 litre up to large industrial diesel engines with 5 litres displacement per cylinder
- Manual gearboxes up to sophisticated automatic transmissions
- Standard to custom
- Test sample variants from 1 to n
- Basic setup with facility to upgrade volumes and variants
- Integration into any system environment
- In-house test bench software ups32/ups64
- Service and after-sales

Flexibility that benefits you
New locations around the world initially provide sales and service backup and are gradually tailored to our local customer’s specific needs. Close cooperation between the international locations and the competence centers in Germany ensures comprehensive support, from the initial planning meeting through to rapid deployment of technical service personnel to work in your plant. The diversity of cultures in the countries to which we supply our systems is reflected in the many nationalities represented among our workforce. Orientation to customer’s needs and close availability are assigned absolute priority in all processes and organizational structures. True to that principle, we locate close to our customers wherever they set up worldwide, so as to meet their needs from a local source. New locations around the world initially provide sales and service backup and are gradually tailored to our local customer’s specific needs. Close cooperation between the international locations and the competence centers in Germany ensures comprehensive support, from the initial planning meeting through to rapid deployment of technical service personnel to work in your plant. The diversity of cultures in the countries to which we supply our systems is reflected in the many nationalities represented among our workforce. A winner in every respect.
Close-by all over the world

Competence center in Bremen (Germany)

Competence center in Langenhagen (Germany)

Local manufacturing facility in Auburn Hills (USA)

Local manufacturing facility in Shanghai (China)

Local sales and service centers in:
- Mexico
- India
- UK
- France
- Spain
- Italy
- Hungary
thyssenkrupp System Engineering operates its own in-house research and development department. High-caliber research scientists and developers are focused on continuously improving our products and processes, backed by innovation teams and a corporate innovation database. We are currently working on various development projects in close collaboration with customers in the automotive and related industries.

Innovations brought to market:

- In-house measuring software ups32/ups64
- In-house integrated NVH-system
- In-house switching robot for manual gearboxes
- In-house quality data management
- Test centers at 3 locations employing over 20 development engineers

Our developments:

- Hardware development for testing functions
- Sensor development
- New fields of business, e.g. test systems for wind power, electric mobility, batteries

We also work in other sectors too: We have developed innovative test systems for wind turbines which have already been successfully brought to market, thyssenkrupp System Engineering has also demonstrated its expertise as an engineering partner for electric mobility.

Committed investment in forward-looking systems and active technology transfer has created a powerful resource of specialist know-how which thyssenkrupp System Engineering places at the disposal of its customers on development projects, and will continue making available in future.
In all its offers, processes and structures, thyssenkrupp System Engineering delivers key added value to help cut customer’s costs.

And ultimately, less risk, less labor, fewer downtimes and lower operating cost mean increased output and more profitability.

Your benefits

More quality

More experience

More flexibility

More proximity

More innovation

The unique appeal of thyssenkrupp System Engineering is that we understand the needs of our customers and are able to meet them rapidly and individually with high-quality products and services.

We aim to persuade you that a long-term partnership with us will deliver greater profitability based on joint projects.
Competency in powertrain test - worldwide