Tailor-made test systems
RENK Test System GmbH

If asked today about the ingredients for the success of an enterprise, these are the ones that spring to mind: innovative technology, products that dovetail with customer needs, modern production methods, creative management techniques and, last but not least, inspired and motivated employees.

To fully utilize on these ingredients, a company must have ample adaptability. Political and socioeconomic conditions are changing dramatically.

RENK Test System GmbH continually faces up to the challenge of responding quickly to global market requirements and developing new and cost-efficient test rig technologies. Our aim is to expand our market position through superior technology.

This brochure portraits our company and acquaints you with the way we think and work.

Tailor-made test systems

This is the maxim guiding our efforts, now and in future. We believe this is in the best interests of our customers, our company and society in general.

Prompted by the need to design and build rigs for developing and testing its own gear units and transmissions, RENK AG founded in 1986 the Control and Test Systems strategic business unit. Ever since 2004, this unit has been operating independently as RENK Test System GmbH (RTS) and is a member of the RENK Group which, in turn, belongs to the MAN Group.

With more than 20 years of experience in drive systems, control and measurement systems and electronics, RTS develops and builds turnkey test systems for the automotive, aviation, rail and agricultural vehicle industries as well as for wind turbines and the military sector. Moreover, we offer perfectly coordinated hardware and software systems, engineering and after-sales services.

Innovative and customized system solutions of ultimate engineering and quality standards are the factors in the success of our business.

Gigs from RENK Test System efficiently reduce development times, enhance quality and cut costs. This assists customers in broadening market shares at the expense of competition.

Product range − turnkey test systems

RENK Test System GmbH supplies turnkey test systems for R&D, production, and quality assurance. Its activities focus on the following applications:

Automotive
- Exhaust systems
- Axles
- Drive trains
- Differential locks
- Torque converters
- Injection pumps
- Drive and propeller shafts
- Generators
- Pistons for I.C. engines
- Clutches
- Steering gears
- Wheel bearing units
- Retarders
- Roller dynamometers for cars, commercial vehicles, and forklift trucks
- Manual and automatic transmissions
- Brakes
- Control housings for automatic transmissions
- Torsional vibration dampers (dual-mass flywheel)

Rail vehicles
- Wheelsets
- Wheelset bearings
- Brakes/brake linings
- Gear units/transmissions
- Couplings

Aviation
- Main rotor transmissions
- Intermediate gearing
- Tail gearboxes
- PTOs
- Rotor systems

Wind turbines
- Nacelles
- Drive trains
- Gear units
- Main rotor and gear unit bearings

Test rig components
- RDDS control and measurement systems
- Variable drive/load units
- Adoption gearboxes (fixed and variable ratios)
- Flywheel sets
- Hydraulic rotary actuators
- Linear actuators for, e.g., throttle flaps
- Shifting robots
- Central hydraulic supply systems
- Wheel hub restraining systems (chassis dynamometers)
- Swiveling platforms

Test rig components
- Test system engineering
- After-sales services
- Maintenance contracts
- Upgrades
Test systems for cars and commercial vehicles

For the test ride in the laboratory

The challenges facing the automotive industry in terms of ride comfort, safety and ecology are getting tougher. Complex electronic systems allow development times to be shortened.

So, it becomes increasingly critical to have reliable test rigs available that simulate reproducible test rides in the laboratory.

Renowned automotive industry developers and their suppliers appreciate RENK Test System GmbH's expertise and how this is translated into customer solutions.

For end-of-line function tests

An objective assessment of quality as seen as the sum of a product's positive characteristics, depends on measurable features. Therefore, fully assembled vehicles or vehicle components are undergoing more and more comprehensive functional and performance tests before leaving the factory.

Customized fail-safe test equipment with short cycle times and a host of automatic features up to full-fledged automation — this is the forte of RENK Test System GmbH.

Test systems for aircraft and trains

For tested flight safety

On behalf of the helicopter industry, RTS develops and builds custom-engineered test systems for such assemblies as the main rotor transmissions, intermediate gearing, tail gearboxes, and auxiliary gear units.

Such applications are especially challenging given the extreme RPM and torque specifications which pose the highest demands in terms of production precision.

Right from the start on the right track

When it comes to rail transport, rising speeds and travel comfort call for more and more powerful components engineered to deliver state-of-the-art performance. Here, too, RENK Test System has its rigs for trying out wheelsets, wheelset bearings, brake systems, etc.
Test systems for wind turbines

For dependable conversion of wind energy

The significance of wind turbines in generating electricity from renewable energies is rapidly rising on a worldwide scale. Today, short development cycles pose challenging demands on the developers of turbines and their components. Complex system interactions as well as dynamic operating conditions are closely analyzed for impact right from the laboratory stage.

RENK test systems facilitate analyses of bearings, gear units down to complete drive trains and nacelles.

With the aid of static and dynamic force and torque impact systems, components are tested under simulated rotor loads.

Electric and/or mechanical RENK rigs allow tests of up to 20 MW.

Test systems for tracked vehicles

For maximum mission availability

Backed by decades of experience in the production of tank transmissions, RENK Test System manufactures test rigs, even highly complex, for transmission development, overhaul and acceptance inspection including all the peripherals such as diesel supply or exhaust systems.

Test rig for tank transmissions

RDDS test rig automation system

For detailed documentation of test results

RDDS (RENK Dynamic Data System)

Open industrial platform according to actual standards in automation for control, data acquisition, visualisation and monitoring of complex test systems in Research & Development as well as in production areas.

A modular design and a very flexible structure allow further upgrades of existing test systems in the automotive-, truck-, agriculture-, railway-, aviation and wind-turbine industries.