Flywheel Brake Dynamometer.
RENK Test System – BD 3.0
From the very beginning on the right track.

RENK TEST SYSTEM.
Your reliable solutions partner.

RENK Test System GmbH (RTS) is a 100 percent subsidiary of RENK AG, a manufacturer of high-quality special gears and drive components. For more than 30 years, RTS has been today, one of the leading manufacturers of customized test systems for R&D, as well as quality assurance at the end of production.

With years of experience, RTS develops innovative test systems for the railway, automotive, aviation, agricultural and wind power industries as well as for off-highway vehicles and the military sector.

Sustained standards for traveling comfort, safety, velocity and environmental protection in the railway sector imply greater complexity for research and quality assurance.

The combination of expertise, technology and experience is the foundation for meeting demands of the growing test equipment market.

With train speeds increasing steadily, the requirement to test and certify key components is absolutely critical to ensuring safe performance. The use of high-performance dynamometers for testing brake systems has been widely adopted in recent years, and the latest designs today can test brakes at simulated speeds almost reaching 600 km/h or more.

RENK Test System produces reliable, cost effective and high-quality solutions for the railway industry which also allow UIC approved development of brake systems.

High speed trains require high-sophisticated brake systems.

**Brake curve of various trains**
Well-proven solution for your requirements. Reliable. Compact. UIC-certified.

Handling today's test standards easily
- UIC (International)
- EPRR (Europe)
- SNCF (France)
- TB (China)
- APR (USA)

Flywheels
Only three mechanical flywheels required

Precision
High precise accuracy of braking force acquisition

Continuous
Stepless simulation of realistic vehicle weights

Technical Data - RTS - FWBD 3.0
- Power (AC-motor): 630 kW
- Inertia range electrical & mechanical approx.: 200 - 4,400 kgm²
- Max. speed: 580 km/h
- Max. braking torque: 30,000 Nm
- Const. braking torque: 6,000 Nm
- Max. braking pressure, (pneumatic): 10 bar
- Dimensions, approx. (l x w x h): 10 x 3 x 3 m

Possible Brake Inertia vs. Specimen Speed

Mechanical Inertia vs. Electrical Simulated Inertia

Braking energy
- Braking energy without simulation
- Braking energy with simulation

Speed
Special tailor-made brake caliper for test rig use.

Recommended add-ons.
Based on our logtime experience sometimes special features are needed to achieve your specific test purposes:

- Damping system
- Static brake test unit
- Wet test unit
- Hydraulic brake pressure circuit
- Disc thickness measurement (DTV)
- Video monitoring system
- Infrared camera
- Wear measurement
- Torque calibration unit
- NVH Measuring system

- Block brake testing
- Support UIC certification
- Climatic simulation
- ... etc.

Test set-ups
- Wheel-mounted brake systems
- Axle-mounted brake systems
- Block-brake systems
- Brake system components, such as brakepads, discs, ...

Features
- Universal easy to use
- Contact force measuring integrated
- Fast changing of brake pads
- Automated wear adjustment
- Integrated displacement measuring

Test Bench Automation System
RDDS.NG
One system for control, monitoring, storage and visualization of your testing task.
- Easy to use and customization
- Easy integration of existing hardware
- Flexible for future changes and upgrades
- Based on client/server architecture
- SQL date base-driven storage
- Use of a standard industrial components (TwinCAT)

RENK offers a wide range of service levels, perfectly matching the requirements of each individual test system.
More than 30 years of experience in servicing test systems makes RENK a perfect partner for your system maintenance.

Customers can select from individual service levels up to a comprehensive all-round package based on our Service Support Contract SSC (Technical Support, Inspection and Maintenance).

Service
Comprehensive, all lifetime service for your system

Maintenance
- Annual Maintenance
- Calibration on regular basis
- Overhaul depending on condition

Support UIC certification

Service Support Contract

Technical Support
- Telephone support
- Online support
- Personal Assistance

Inspection
- Annual Inspection
- Evaluation of system status
- Determination of scope of maintenance

Learn more online about our Railway Test System
www.renk-ag.com/goto/2-9ec35da

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Recommended add-ons.
Follow the QR-Code and discover more efficient and sustainable test system solutions by RENK.

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