

Flywheel Brake Dynamometer. RENK Test System – BD 3.0

Test Systems for Railway Applications



EMPOWERING FORCES.



Secure

RENK safety concept – more than just CE conform

Safe

RENK RDDS – reliable data base for your test results

Sure

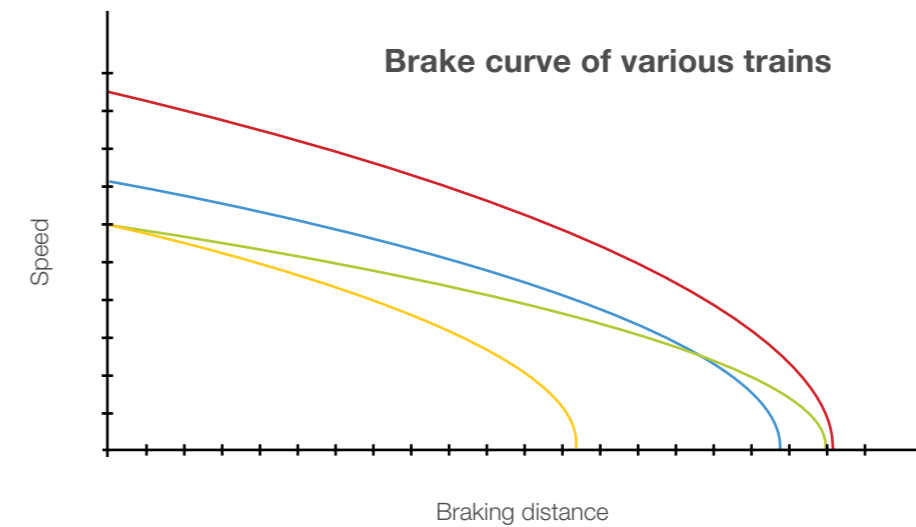
RENK Support – cradle to gate for your test system

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.

From the very beginning on the right track.



Latest development in track laying and trains allow higher speed resulting in larger braking distances.

High speed trains require high-sophisticated brake systems.

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

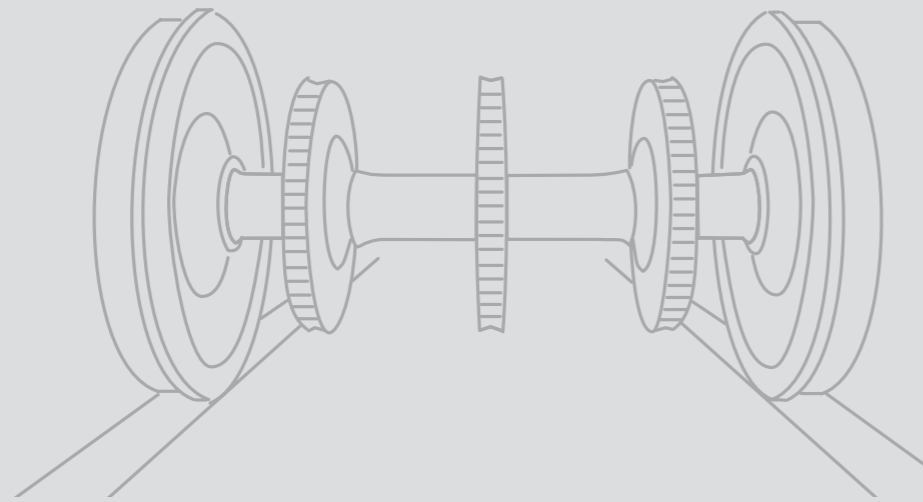
safe performance. The use of high-performance dynamometers for testing brake systems has been widely adopted in recent years, and the latest designs today can test brakes at simulated speeds almost reaching 600 km/h or more.

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

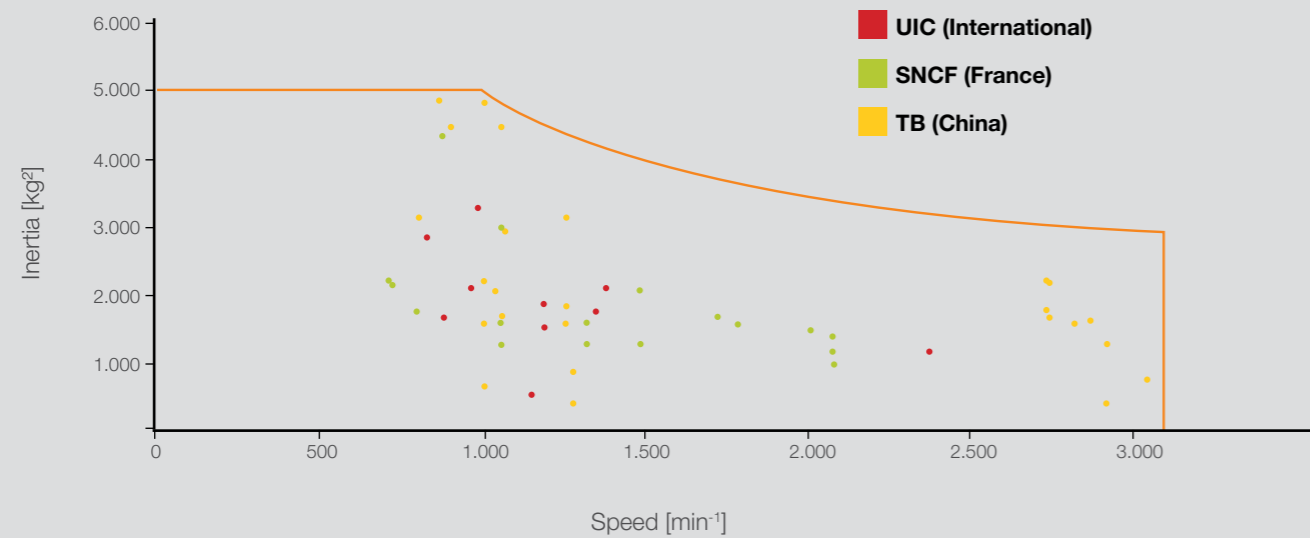
Well-proven solution for your requirements. Reliable. Compact. UIC-certified.

Handling today's test standards easily

- UIC (International)
- ERRI (Europe)
- SNCF (France)
- TB (China)
- ARR (USA)



Possible Brake Inertia vs. Specimen Speed



Flywheels

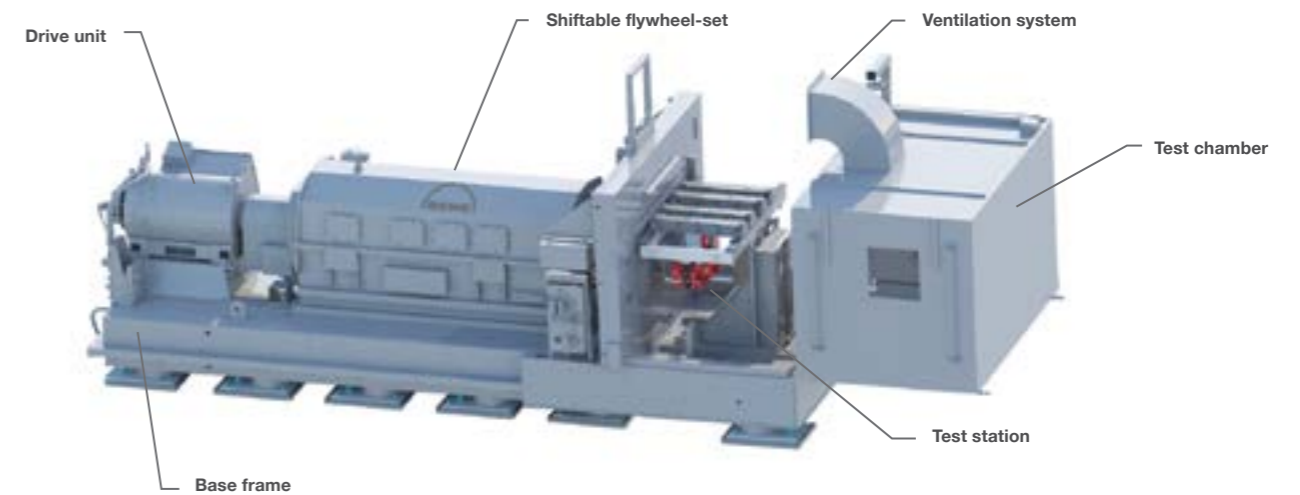
Only **three mechanical flywheels** required

Precision

High precise accuracy braking force acquisition

Continuous

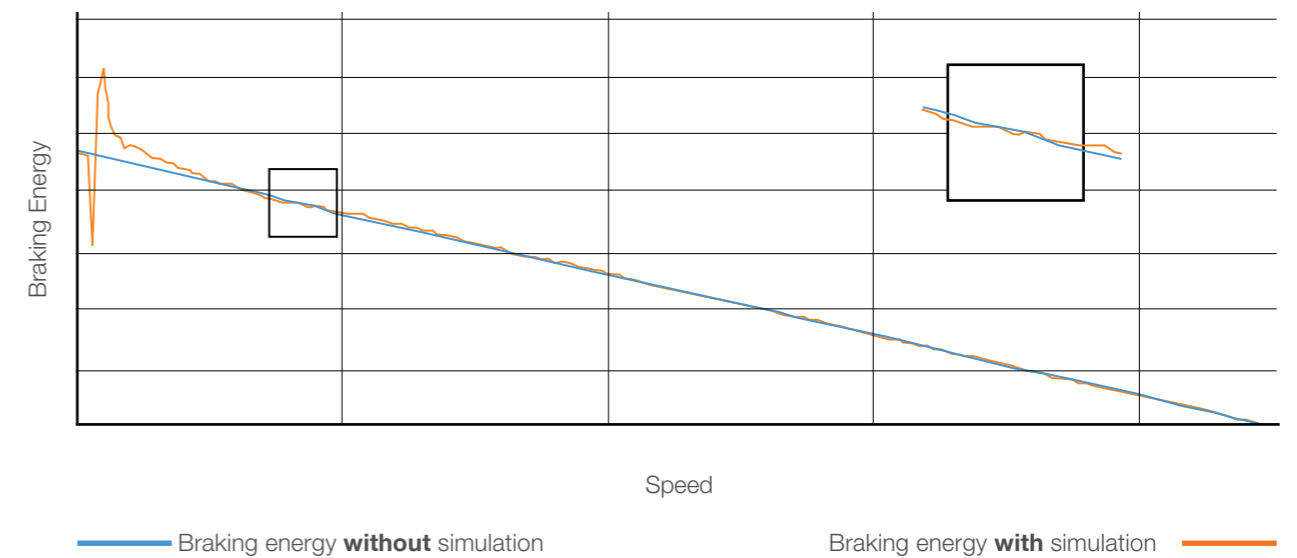
Stepless simulation of realistic vehicle weights



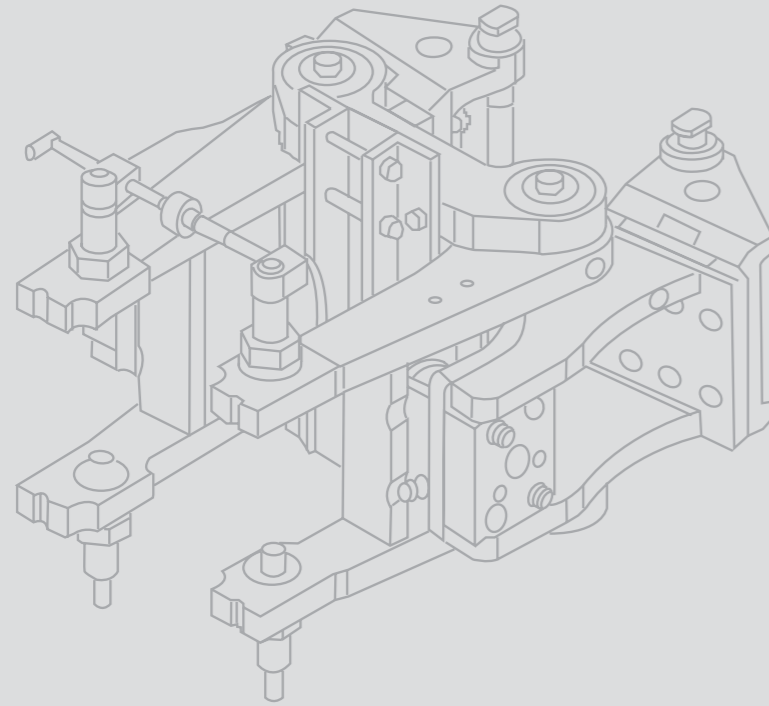
Technical Data - RTS - FWBD 3.0

Power (AC-motor)	630	kW
Inertia range electrical & mechanical approx.	200 - 4,400	kgm ²
Max. speed	560	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

Mechanical Inertia vs. Electrical Simulated Inertia



Special tailor-made brake caliper for test rig use.



Features

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

Recommended add-ons.

Based on our logtime experience sometimes special features are needed to achieve your specific test purposes:

- | | |
|-----------------------------------------------------------|----------------------------------------------------|
| <input type="checkbox"/> Damping system | <input type="checkbox"/> Block brake testing |
| <input type="checkbox"/> Static brake test unit | <input type="checkbox"/> Support UIC certification |
| <input type="checkbox"/> Wet test unit | <input type="checkbox"/> Climatic simulation |
| <input type="checkbox"/> Hydraulic brake pressure circuit | <input type="checkbox"/> ... etc. |
| <input type="checkbox"/> Disc thickness measurement (DTV) | |
| <input type="checkbox"/> Video monitoring system | |
| <input type="checkbox"/> Infrared camera | |
| <input type="checkbox"/> Wear measurement | |
| <input type="checkbox"/> Torque calibration unit | |
| <input type="checkbox"/> NVH Measuring system | |

Test set-ups

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

Service

Comprehensive, all life-time service for your system

RDDS

The automation system for your test bench



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

Individual Service Concepts – Service Support Contract.

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 Support Contract

Inspection

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

Technical Support

- Telephone support
- Online support
- Personal Assistance

Maintenance

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

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)



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



Find out more online about
test systems from RENK.
www.renk-ag.com/goto/0-41ddf99

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