



Add value.
Inspire trust.

Digital Automatic Coupling (DAC) Testing for your Rolling Stock

Test your DAC with TÜV SÜD to ensure safe freight transport on rail

Your challenges

Transport policies change towards sustainability. Enforcing goals of the European Green Deal, it is inevitable to shift freight traffic from road to rail to reduce CO₂ emissions. To ensure the competitiveness of rail as freight transport, it is important to move towards automatisisation and digitalisation. A positive effect of this change will be higher cost-efficiency, meaning an automatic coupling system could pave the way for future rail freight transportation.

The European rail sector is currently the only one still relying largely on manual coupling. As the coupling process is one of the main procedures in train operation, a simplification of the process benefits rail freight traffic immensely. With digital automatic coupling, the rail coupling process is transforming to become fully digitalised and automated. This makes the entire process faster and results in greater capacity at terminals and railway yards, which leads to a more even process flow.

Additionally, introducing digital automatic coupling will allow for the introduction of heavier and longer freight trains that operate with higher speeds, while using the rail wagons more efficiently.

What is DAC and what needs to be adapted?

DAC is based on the Scharfenberg coupler design. However, to use it for heavy freight traffic, this rail coupler must be adapted to the challenges this brings. DAC needs to be aligned with the digital functions that are required. Existing use cases of the Scharfenberg coupler have different requirements than digital automatic coupling, therefore close monitoring and various coupler tests are essential.

How can we help you?

TÜV SÜD accompanies you during the development of DAC and subsequently the coupler testing. Our experts holistically support you through all stages of the digital automatic coupling process.



- **Gain a competitive edge** – as we have the ability to support with testing complete trains on the public railway network.

Why choose TÜV SÜD?

TÜV SÜD is a globally trusted partner for services regarding safety, security, as well as sustainable solutions. With our own rolling stock test center specifically founded for the development and testing of automatic couplers in Görlitz, TÜV SÜD has specialists with great experience in the field of digital automatic coupling testing. On our own siding we have various possibilities for all kinds of DAC tests.

Our comprehensive tests for digital automatic coupling for rolling stock

We offer various testing possibilities, from static tests on testing machines over driving tests in different track geometries to impact testing wagon against wagon.

The DAC tests we offer include:

- Static tests and quasi-static tests of coupler in push-and-pull testing machine till 2500 kN
- Tests of safety against derailment in propelling test based on EN 15839
- Driving tests in different curves and on ferry ramp
- Impact tests wagon against wagon on straight and curved track
- Single loads and live cycle tests on pendulum test rig

We offer our DAC tests also on railway network in DACH region and beyond.

Your business benefits

- **Minimise risk** – as our experts support you in identifying potential problems at an early stage. This reduces the effort required for development and streamlines the process of introducing digital automatic coupling.
- **Receive overall services for DAC** – as our testing services cover the entire DAC process from the beginning until the completely adopted train.
- **Gain reliable specialist knowledge** – on our TÜV SÜD Rolling Stock Test Center in Görlitz (Germany), which was founded to develop and test automatic couplers. The test center offers all required testing machines for DAC and features a siding with its own locomotive and wagons for early-stage testing.

Our TÜV SÜD Rolling Stock Test Center holds various accreditations

- Test laboratory according to DIN EN 17025 for tests of safety against derailment (EN 14363 and EN 15839)
- Tests of coupling systems according to EN 15566 and 15551
- Further tests of railway vehicles and components

Add value. Inspire trust.

TÜV SÜD is a trusted partner of choice for safety, security and sustainability solutions. It specialises in testing, certification, auditing and advisory services. Since 1866, the company has remained committed to its purpose of enabling progress by protecting people, the environment and assets from technology-related risks.

Today, TÜV SÜD is present in over 1,000 locations worldwide with its headquarters in Munich, Germany. Through expert teams represented by more than 25,000 employees, it adds value to customers and partners by enabling market access and managing risks. By anticipating technological developments and facilitating change, TÜV SÜD inspires trust in a physical and digital world to create a safer and more sustainable future.

Related services

TÜV SÜD provides the following related services:

- Rail Vehicle and Component Testing
- Rolling Stock Services
- Operation and Maintenance
- Independent Safety Assessment