AZT Automotive GmbH
Allianz Zentrum für Technik

Crash track

The crash centre of the Allianz Centre for Technology offers various services in the field of vehicle safety and testing. These include crash tests, simulations of accident scenarios, research and development in the field of vehicle safety and consultancy services for manufacturers and regulatory bodies.

The design of the crash system ensures very high accuracy in the low-speed range and thus guarantees compliance with the parameters for tests in repair research. At the same time, the system can also fulfill some ECE component test standards with payloads of up to 250 kg. For demonstration tests in the field of road safety research, vehicle tests can be carried out at impact speeds of up to 45 km/h.

The crash track works with an electric drive and fixed mechanical coupling of the object to be accelerated. This avoids the coupled transverse & longitudinal swinging that typically occur with chain traction devices. The length of the track is 23.5 metres, so that even the length of the traction cable does not introduce any relevant swinging into the test sample. This means that the system can be used with very high repeat accuracy in the range between 4 km/h and 20 km/h for cars weighing up to 3,000 kg. The measurement equipment complies with current standards and can perform all measurements required by RCAR standards.

A BioRid II dummy allows the seat performance to be assessed in the event of a rear impact and Hybrid 3 dummies (50% male and 5% female) are available for special tests. These dummys have reduced measurement equipment.

Up to four digital high-speed video cameras are used for documentation of tests.

Overall, these technical features enable the Allianz Centre for Technology to carry out comprehensive and precise vehicle safety tests and gain valuable insights for the further development of vehicles regards TCO total cost of ownership.