



Choose certainty.
Add value.

Wheel testing

Ensure your wheels match OEM and export requirements.

Your challenges

When it comes to selecting wheels for series production, vehicle original equipment manufacturers (OEM) have demanding requirements for quality, safety and performance. To ensure acceptance by these OEMs and meet export requirements, wheel manufacturers must have their products tested and provide technical reports from a neutral, independent third-party organisation.

What wheel tests are available?

Wheel testing involves a series of tests that are carried out to meet vehicle OEM requirements or the specifications of test standards on bending fatigue, radial fatigue, biaxial impact, energy absorption, radial impact or torsion.

Why are these tests important for your business?

Independent wheel tests carried out by a certified test lab play a pivotal role in evaluating the quality of your product and increasing sales. They are also necessary to meet the testing requirements for homologation, enabling export to key markets. Furthermore, manufacturers need wheel tests to ensure the consistent quality of their product, and to gather the test data used for the development of new wheel models.

How can we help you?

TÜV SÜD provides you with the full scope of wheel tests according to standards, regulations and customer-specified requirements. These tests are applicable to wheels for passenger cars, motorcycles, trucks, agriculture vehicles and other special vehicles. We can conduct wheel testing to the following test standards: StVZO, ECE, VIA, JWL, JASO, SAE, ISO, INMETRO, EUWA and AK-L08.

Our wheel testing services

TESTS	WHEEL DIAMETER	WHEEL WIDTH	BENDING MOMENT	SPEED RANGE	LOAD RANGE	TORSION
BENDING FATIGUE	10" to 34"	5" to 26"	2 kNm to 70 kNm	Variable speed		
RADIAL FATIGUE	13" to 36"	5" to 26"		20 to 450 km/h	100 kg to 12,000 kg	
RADIAL FATIGUE – BIAXIAL	13" to 22"	10" to 20"		20 to 360 km/h	5,000 kg	
IMPACT TEST 13°	13" to 22.5"	10" to 22"		Not specified	Up to 1,000 kg	
ENERGY ABSORPTION TEST	Until 22.5"	1 x 1 [m]		Not specified	250 kN	
RADIAL IMPACT TEST	13" to 22"	10" to 20"		Not specified	Up to 4500 J	
TORSIONAL TEST	10" to 22"	3.5" to 9"		Variable speed		1,800 Nm
MATERIAL PROPERTIES	All	All		Not specified		

Your business benefits

- **Reduce design time and improve product quality** – through advanced testing by the highly experienced and skilled TÜV SÜD wheel testing team.
- **Gain recognition and reputation for your brand** – among OEMs and end consumers by leveraging on TÜV SÜD's strong reputation as the leading tyre and wheel testing expert.
- **Benefit from a complete solution** – with the full scope of tyre and wheel tests provided by TÜV SÜD.

Why choose TÜV SÜD?

TÜV SÜD has over 25 years of experience in wheel testing, and is the biggest independent institute for tyre and wheel technologies in Europe. We operate advanced wheel testing facilities that are equipped to conduct the full scope of tyre and wheel tests.

Our experts are highly trained professionals who work extensively with top automotive OEMs and suppliers worldwide. Through this experience, we have developed a strong knowledge of manufacturer and vehicle OEM requirements. We also have the expertise to conduct testing on special wheels that are not covered by any standards, such as wheels for trucks and agriculture vehicles.

Choose certainty. Add value.

TÜV SÜD is a premium quality, safety and sustainability solutions provider that specialises in testing, inspection, auditing, certification, training and knowledge services. Represented in over 800 locations worldwide, we hold accreditations in Europe, the Americas, the Middle East and Asia. By delivering objective solutions to our customers, we add tangible value to businesses, consumers and the environment.

Related services

TÜV SÜD provides the following related services:

- Vehicle and component testing
- Functional safety services related to ISO 26262
- Integrated quality assurance
- ISO/TS 16949 – Automotive certification scheme
- International homologation and type approval
- Tyre testing