

Europe Testing Facilities

Laboratory and Vehicle Testing

Since 2008, LINK has offered testing services in Europe and has continued to expand our offerings. LINK has built a team of professional engineers and technicians who specialize in laboratory testing and field vehicle testing. The LINK team is dedicated to supporting customers with robust and turnkey testing solutions.

Utilizing any of LINK's European facilities results in an incredibly reliable and efficient experience. Providing excellent service is LINK's top priority; each team is highly customer-focused and works to ensure a successful custom business solution, no matter the need. Working with LINK means gaining a technically accurate and confident partner, with quick project solutions and delivery.

For over 85 years, Link Engineering Company has been providing customers with the best solutions in test equipment and testing services. Specializing in customized solutions with a focus on delivering high value to each customer, offerings include the design and manufacture of customized, high precision tests, research, simulation, and quality control equipment, as well as comprehensive test services. The LINK team possesses a wealth of knowledge, providing decades of hands-on experience and innovation to support our global customer base with highly technical solutions.

The LINK logo consists of the word "LINK" in a bold, white, sans-serif font, centered within a dark blue rounded rectangular border with a white inner outline.

LINK

Limburg, Germany - Laboratory & Vehicle Testing Facility

LINK has provided Limburg with extensive laboratory and vehicle testing since 2012, satisfying all of their customers' testing needs by implementing a laboratory that is fully outfitted with the latest testing equipment. The Limburg facility offers exceptional precision testing and reporting, vehicle setup, and support capabilities, and is continuously looking for ways to expand upon current service offerings to best serve the local region.

LABORATORY TESTING

AVAILABLE EQUIPMENT

- Noise Vibration Harshness (NVH) and Performance Dynamometers
- NVH Dynamometers
- Brake Performance Dynamometers
- Compressibility Testers
- FRF Measurement Equipment
- Krauss Brake Testing Equipment
- Brake Emissions Testing Equipment
- Corrosion Chamber
- Salt Spray Dynamometer

KEY TESTS

- SAE J2521 And Derivates
- Fatigue, Shock, Crack, Overload Testing
- SAE J2522
- Saltwater Tests, Shock-Corrosion
- Disc Thickness Variation (DTV) and Wear Endurance Tests
- ECE R90
- Bedding of Rotors and Linings
- Race Track Simulation
- Brake Emissions (Including WLTP-Brake Cycle)
- Residual Drag Measurements

LINK's experienced test engineer teams provide full support to meet all of our customers testing procedures and requirements.

VEHICLE TESTING

LINK's vehicle testing services aim to create an efficient and seamless testing experience. LINK will handle everything from vehicle set up, parts measurement and changes, test execution, and reporting. LINK also provides equipment and transducer rentals.

NVH TESTING

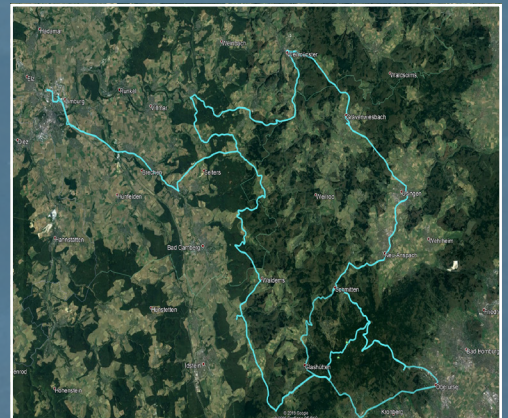
- NVH Test Route in Taunus Area for NVH and Wear Endurance Tests
- 320km per 8h run
- 16h per day
- Five days per week (Monday through Friday)

PERFORMANCE TESTING

- Public Roads
- Proving Grounds

ADDITIONAL TESTING

- Pass by Noise
- ADAS testing
- Steering testing
- Endurance testing
- Customized test program per special request



Magenta, Italy – Laboratory Testing Facility

LINK's test laboratory in Magenta, Italy, has the latest testing laboratory equipment for NVH testing, performance, wear, and other customized solutions. Since 2016, the team has specialized in precision testing equipment, consulting, design, installation, and support for both standard and personalized products. The laboratory is furnished with a wide range of testing equipment, including:

- Brake NVH and Performance Dynamometers
- Krauss Brake Testing Equipment
- Rotor Wear and DTV Mapping Machine
- Dynamic Wheel Loading Units
- Linear and Rotary Hydraulic Actuators
- FRF Measurement Equipment (coming in 2020)
- Vehicle Data Acquisition System (coming in 2020)

The Magenta laboratory is also equipped with a machinery shop for part fixturing. LINK's brake testing experts and chassis component testing experts are prepared to handle all clients' testing criteria, ranging from standard testing procedures to more custom or advanced testing.

KEY TESTS

- Noise Vibration and Harshness (NVH)
- Performance & Wear
- Deformation and Cracking
- Durability and City Traffic Simulations
- Tests Under Environmental Control
- Vehicle to Dyno Correlation
- Regen Simulation for BEV Brake Testing
- Disc Thickness Variation (DTV)
- Friction Material Output
- Lining QC Testing
- Bedding of Brake Rotor and Lining
- Brake Caliper Strength and Endurance Testing

AUXILIARY SERVICES

- Customized Test Programs
- Data Analysis and Post Processing
- Support to Brake Functional/Performance/Noise Issues Resolution
- Brake Lining Screening
- Brake Pads Chamfers Screening
- Anti-noise Shims Screening
- Brake Components Design Modification
- Brake Pad/Rotor Wear Mapping
- Brake Rotor Dynamic Deformation/DTV Measurement
- Test Samples Crack Detention
- ODS and Laser Vibrometry (with external support)
- Regenerative Braking Simulation
- Vehicle-to-Dyno Duty Cycle Simulation
- On-Dyno Wheel Road Loads Simulation
- Fixture/Adapters Design and Manufacturing
- Bedding for Small Production Series
- Brake Lining Output QC Testing
- Test Samples FRF and Modal Analysis
- Vehicle DAS Installation and Renting



Mojacar, Spain – Vehicle Testing Facility

With a growing demand for LINK vehicle testing services in Spain, LINK established vehicle testing teams and local support in Mojácar in 2019. As part of LINK's growth in the European region, testing solutions in Spain also include vehicle set up, parts measurements and fixturing, test execution, reporting, and equipment and transducer rental.

KEY SERVICES

- Vehicle DAS Renting and Support
- Execution of Customized Test Programs Per Special Request
- Vehicle DAS Installation
- Vehicle Setup
- Data Analysis and Post Processing
- Parts Measurements and Setup

KEY TESTS

- Noise Vibration and Harshness (NVH)
- Durability
- City Traffic Simulations
- Wear

NVH TESTING

- NVH Test Route in Mojácar area for NVH, Durability, and Wear
- 360km per 8h run
- 16h per day
- Six days per week (Monday through Saturday)

LINK's skillful team can provide full support in developing scripts, running tests, and creating report templates, as well as fixturing test parts to meet all testing procedures and requirements.



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Elz, Germany – Vehicle Testing Facility

Established in 2009, our Elz vehicle testing location is the competence center for V-Max development and support, brake NVH testing, brake endurance, and NVH engineering support. We have also expanded our capability in Durability Fleet Program Performance Testing (Voice of Customer/Reliability Growth/ADAS).

AVAILABLE EQUIPMENT

- Data logger systems
- Mobile DTV & rest torque systems
- NVH equipment, including various microphones and sensors

CAPABILITIES

- Vehicle Testing on public road and test tracks
- Vehicle Instrumentation
- V-Max Sales and Support
- Brake NVH Consultancy
- Vehicle Benchmark Testing
- Vehicle DTV Testing
- Vehicle Residual Torque Testing
- Project Management
- Route Planning
- Vehicle & Data Management
- Logistic (Logistic/ MT/ Data)



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Test Smarter.