

**innovate
test
repeat**



MCD ELEKTRONIK GMBH

**TEST SYSTEMS
FOR ELECTRONIC PRODUCTION**



**From conception to
commissioning on site.
Cutting edge measuring and
testing technology since 1983.**



**SYSTEMS
ACCORDING
TO PLAN**

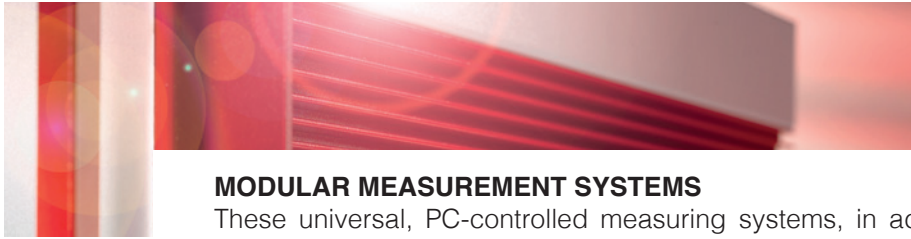
EXPERIENCE & FUTURE

MCD Elektronik GmbH was born in 1983 to turn an idea into reality. It revolved around an idea that no one believed could work at the time - a calibration line for setting output levels on HF transmitters.

Today, over **60 experienced specialists** work for the Birkenfeld-based company. The requirements that MCD customers have often go to the limits of what is technically feasible. Every single idea is still being realized for the same reasons as back then. As a result, MCD Elektronik GmbH has become an owner-managed company that supplies **complex test and automation technology** worldwide. The systems are used by well-known corporations as well as medium-sized companies for the production and testing of electronic and mechatronic assemblies. For example, they use the test systems to check vehicle components such as electronic control units, steering wheel modules or infotainment systems. Forward-looking projects in the smart home and e-mobility sectors are also successfully realized at MCD.

These developments are **innovative** because they come about from application and they come directly from the customers. MCD customers are often the real innovators. Based on this strong cooperation and with continued commitment, MCD measurement technology is being expanded for the future.





MODULAR MEASUREMENT SYSTEMS

These universal, PC-controlled measuring systems, in addition to MCD's software platforms, provide a powerful measurement and control unit in 19" technology for complex test systems.



CONTROL SYSTEMS

With these components by MCD, building up of complex systems will be essentially simplified and controlled. Control tasks are distributed to intelligent sub-systems and are controlled by these control units.



AUDIO / VIDEO MEASUREMENTS

PC-based MCD hardware components, in functional interaction with the Toolmonitor "AudioAnalyzer" or software platform "TestMate", outline a cost- and space-saving alternative to stand-alone devices.



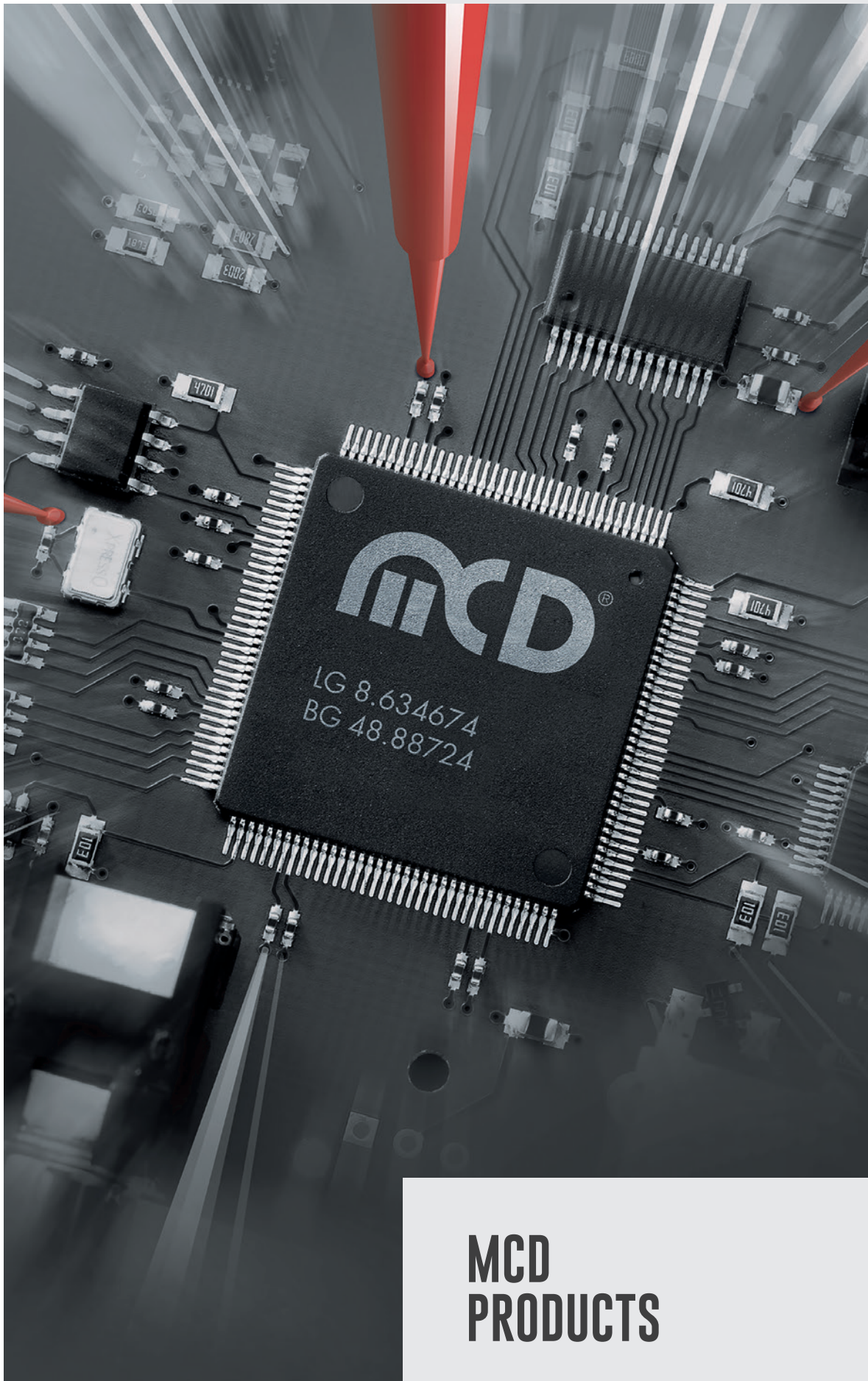
MEASUREMENT SOFTWARE

MCD's comfortable software solutions enable the user efficient collection and analysis of specific data. Particularly in the areas of audio and video analysis, they are usually the better and inexpensive solution to expensive hardware.



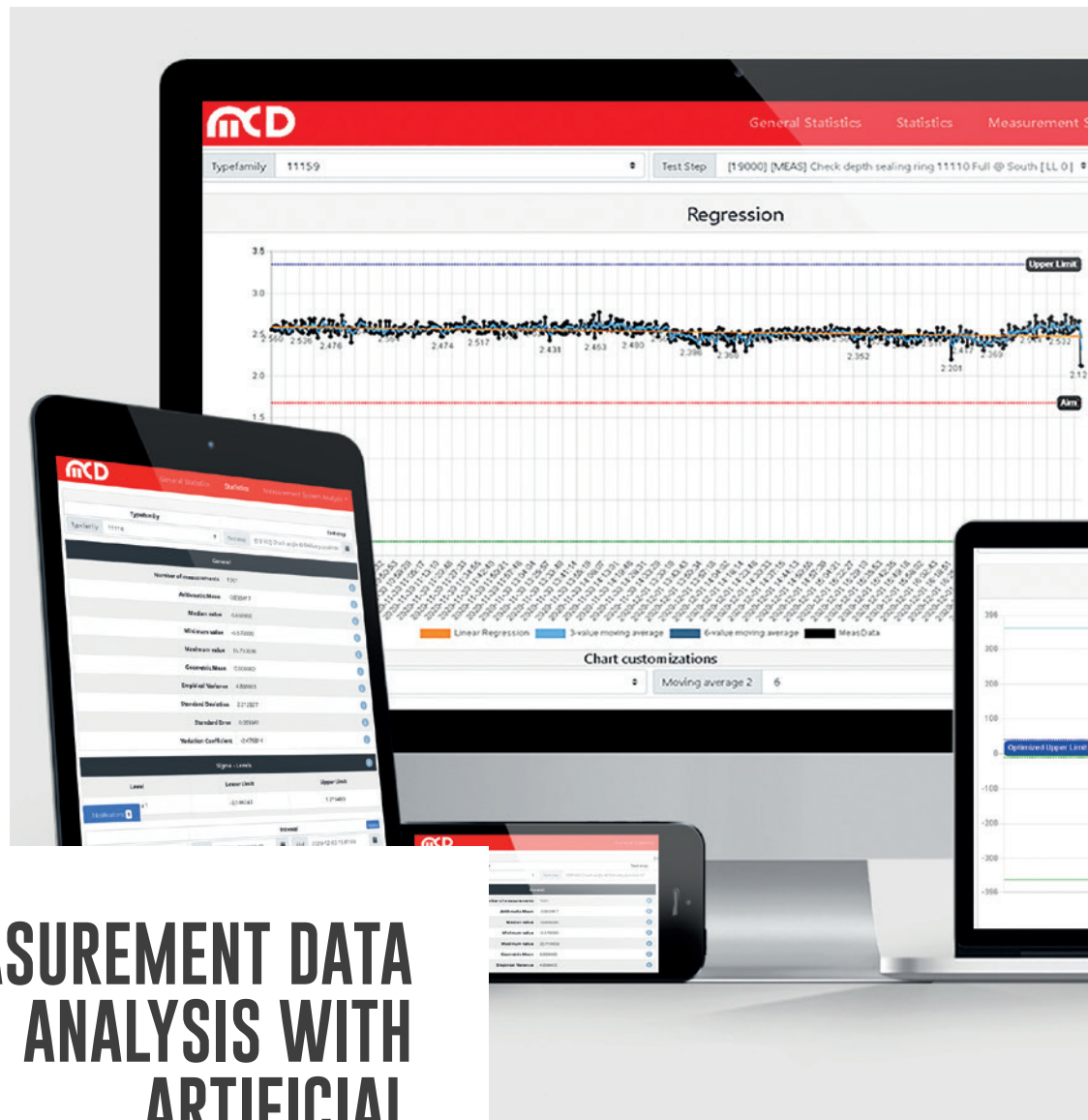
BOARDS

Especially for the test engineering developed MCD boards for multiplexing and various types of signal processing. Through the use of the MCD Toolmonitors, these cards can be controlled with any programming language.



**MCD
PRODUCTS**

MEASUREMENT DATA ANALYSIS WITH ARTIFICIAL INTELLIGENCE



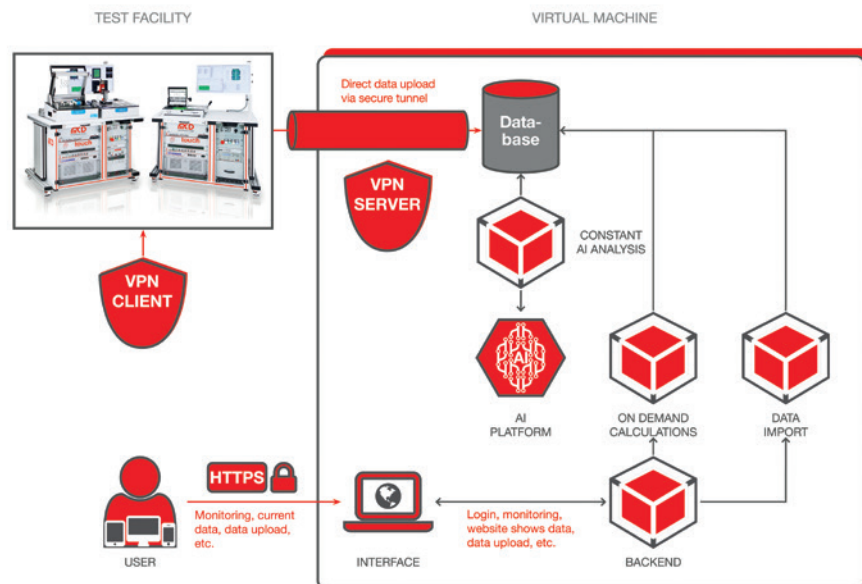
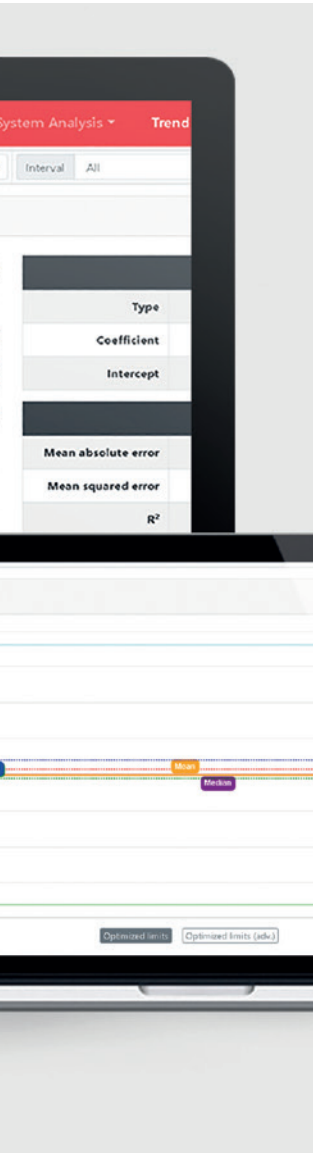
REFERENCE APPLICATION FROM THE SOFTLINE

The rapid development of Industry 4.0 and digitalization in production has meant that AI can now also be used in the field of measurement and testing technology. **Intelligent software algorithms** explore the collected data to establish the complex relationships, recognize regularities and derive **forecasts for the future**.

In automated production, for example, potential errors and cost drivers can be identified, process efficiency

is increased and **predictions** are developed **regarding product and test quality**.

The real-time processing of large amounts of data in the test field is done **faster and more accurately** through the artificial intelligence tools than the capabilities of a human user.



TECHNICAL SCOPE

- Trend detection
- Virtual operating system
- Parameter optimization
- Individual measured value analyses
- Cluster analyses
- Deviation detection
- Correlation detection
- Permanent AI analysis

AN AWARD AS THE RESULT OF YEARS OF TEAMWORK

According to the independent TOP 100 competition, MCD Elektronik GmbH is one of the **most innovative** companies in the SME sector in Germany. TOP 100 is the only competition in Germany that evaluates innovation management and the innovation successes of companies.

For MCD, being part of the TOP 100 elite reflects the strength of its **innovation culture**. The company fosters an environment where employees work in interdisciplinary teams, adopt creative ideas, and transform concepts into market-relevant solutions. In recent years, MCD's innovations have emphasized sustainable practices, **smart testing technologies** for electromobility and smart home systems, and flexible approaches to process development and team structures.

This continuous recognition demonstrates not only MCD Elektronik's technical excellence but also its **strategic focus** on forward-looking solutions that drive growth, customer value, and industry leadership in automated test engineering and quality assurance.



A FINE SENSE FOR INNOVATIONS

**MCD Elektronik is one of the
most innovative companies
in the German SME sector.**





AUTOMOTIVE

- Battery management systems
- Infotainment systems
- Steering wheel modules
- Flap actuators



CONSUMER ELECTRONICS

- Wall charging stations
- Smart home controls
- E-bike motor controls
- Fitness tracker



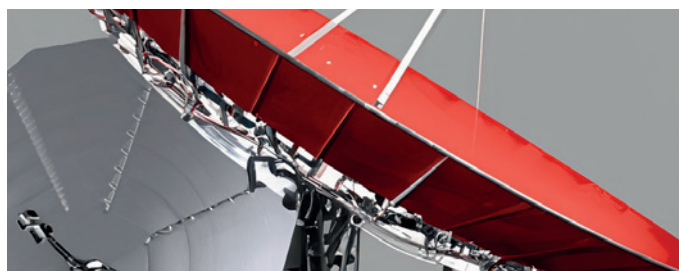
MEDICAL & LABORATORY TECHNOLOGY

- Inhalers
- Dental technology PCBs
- Laser modules
- Gas sensors



ENERGY TECHNOLOGY

- Solar control units
- Air conditioning compressors
- High-voltage heaters
- LED power supply units



TELECOMMUNICATIONS

- Wi-Fi, UMTS, BT communication
- Multifunctional antennas
- Headsets
- NFC access systems



SENSOR & AIRCRAFT CONSTRUCTION

- Floor heating devices
- LED ribbons
- Drive sensors
- Special blowers



CUSTOMER PROJECTS FROM DIFFERENT INDUSTRIES

MCD Elektronik supplies complex test and automation technology used for the **production and testing of electronic and mechatronic assemblies**. The spectrum ranges from simple test adapters to **fully automated test cells** that are integrated into production lines.

Customers from the automotive, consumer electronics, medical and laboratory technology, energy technology, telecommunications and sensor and aircraft construction sectors have their test systems developed and manufactured by

MCD. Due to the "zero tolerance policy", MCD systems ensure the **high quality** of many renowned companies, which has made MCD Elektronik GmbH one of the **leading suppliers of measurement and test systems**.





**THE
FUTURE
IN VIEW**

MANAGEMENT & HR PHILOSOPHY



At MCD Elektronik, innovation thrives because of people. Our leadership and HR philosophy form the backbone of our company - fostering a culture of **collaboration**, expertise, and long-term commitment that drives success across global markets.

Since 2023, Dr. Thomas Däubler has led MCD Elektronik as CEO, bringing a forward-looking perspective rooted in extensive experience in engineering, management, and team development. His appointment marked a carefully planned transition that ensures continuity, deep respect for the company's history, and a **clear strategic direction** for the future.

At MCD, people are more than employees, they are the creative force behind every solution. Our human resources strategy emphasizes: Personal growth and responsibility, enabling team members to take ownership at all levels. Short decision-making paths, fostering agility and responsiveness to customer needs. Long-term engagement, with many colleagues celebrating years of loyal service.

Leadership at MCD believes that communication, transparency, and trust strengthen performance - and this empowers teams to tackle **complex challenges** in test and automation technology.

With customers in over 55 countries and strategic branches abroad, we combine international reach with deep local engagement. This global footprint is supported by teams who understand diverse markets, meet specific customer requirements, and bring tailored solutions to life.

"Our employees - satisfied and engaged - are the driving force of every successful company."



END-OF-LINE TEST SYSTEMS

The end-of-line testers are responsible for **checking all functionalities** of a product at the end of the manufacturing process. MCD designs fully automated test cells for integration into production lines for **quality assurance**. The systems are partly supported by the use of AI as well as manufactured with the integration of robots - from the planning of the system to the commissioning on site - everything from a single source. The system shown on the right can be used to test circuit boards for battery management in electric cars.

MCD PROJECTS

VTS 2030 - STANDARD TEST SYSTEMS

MCD has laid the foundation for completely new possibilities in the field of test system construction with the "VTS 2030" test system series. This **standardized concept** means that there are virtually no limits to individual customer requirements, which means that the test systems are fully optimized for the customer's processes and quality requirements. The **future viability** of the systems is also guaranteed by **flexible adaptation options** of the common test adapters.





FUNCTIONAL TEST SYSTEMS

MCD functional test systems test, analyze and process **functionality data** from components that are inserted **directly into these systems**. The system shown on the right tests the functionality of printed circuit boards of infotainment systems of an automotive supplier. Four test samples can be tested asynchronously here. Due to the wide opening of the adaptation, the system is also suitable for automated operation with robots.

MCD PROJECTS

INLINE TEST SYSTEMS

In addition to a single test stand, several MCD test systems can be **integrated side by side** into a production line ("inline") to increase **efficiency in production**. Taking into account the individual test samples, MCD provides advice from planning to commissioning on site. The system shown on the left performs a test of printed circuit boards for infotainment systems in the automotive sector. This is **fully automated** and also includes assembly via an inline conveyor belt with intelligent barcode sensor handling.



MCD SERVICES



PLANNING

MCD develops turnkey test systems. From the **basic idea to commissioning** on site. The planning covers all phases up to production.



DOCUMENTATION

MCD test systems are delivered with detailed documentation. This usually consists of **system documentation** and **technical documentation**.



SERVICE

The service staff accompany the projects from the beginning on the technical side, carry out the **commissioning** at the customer's location and ensure smooth system operation.



TRAINING

Training ensures that each new system is **used productively**, operated safely and **maintained efficiently** from day one. Necessary training courses are tailored to the customer's requirements.



CALIBRATION

The results of the calibration are recorded in a **calibration certificate** with a separate **measurement log** and stored in a database. An on-site re-calibration can take place on request.



REPAIR

If a product defect or **malfunction** has occurred under normal circumstances of use within the warranty period, the unit can be **sent in for repair** free of charge.

ACHIEVING THE GOAL TOGETHER

Good project management, from the enquiry to the installation of the system, is **efficient** and **goal-oriented**. MCD technicians are **quickly available** for after-sales service. Customers are supported throughout the entire product life cycle of the test systems and MCD service can be on site at short notice, far beyond the borders of Germany.

MCD EMPLOYEES - THE HEART OF THE TEST SYSTEMS



A DYNAMIC TEAM

The company's long-standing success is largely due to its **dedicated employees**. Their creativity, competence and experience are decisive for the successful implementation of every project from the Birkenfeld headquarters.

"Cuddle Manager" Leyla, pictured right, also regularly provides entertainment and relaxation in the workplace at MCD.



**Driven by the credo "Innovate, Test, Repeat.",
MCD develops innovative, customer-specific
"Made in Germany" test systems designed
by qualified technicians and engineers.**



In order to be competitive in the international market in the long term, it is important for MCD Elektronik to be represented on a global level. This is confirmed by a current **export share** of approximately **80%**, which is made up of **customers** served in over **55 countries**.

MCD Elektronik GmbH is proud to have trusted **representatives** in the **Shanghai and Budapest** offices. These representatives realize the important processes of project preparation, commissioning, calibration, training as well as the implementation and support of trade fairs directly on site.



MCD Elektronik GmbH places great value on **further development and innovations** that advance the company and its employees. On a regular basis, this innovative strength is recognized by the awards in the **TOP 100** competition for medium-sized companies. MCD Elektronik GmbH received the independent industry award for the first time in 2018 and has successfully participated every year since then.

TOP 100 is the only competition in Germany that evaluates the innovation management and innovative success of companies. Around 120 defined evaluation parameters, such as "innovative processes", "climate of innovation" or "open innovation", are examined.



The employees of MCD Elektronik GmbH form the heart of the developed test systems. Approximately **60 specialists** ensure that the highest quality finds its way into every production. The employees take care of **quality assurance** down to the smallest detail. The company's long-standing success is largely due to the employees at MCD.

Their creativity, competence and experience are decisive for the successful implementation of every project that comes out of the Birkenfeld head office. A high degree of personal responsibility and short decision-making channels make it possible to react **quickly and flexibly** to all requirements.