

Zwick / Roell

3.62 N

is the force you need to tear open this brochure.  
We know this because we've tested it.

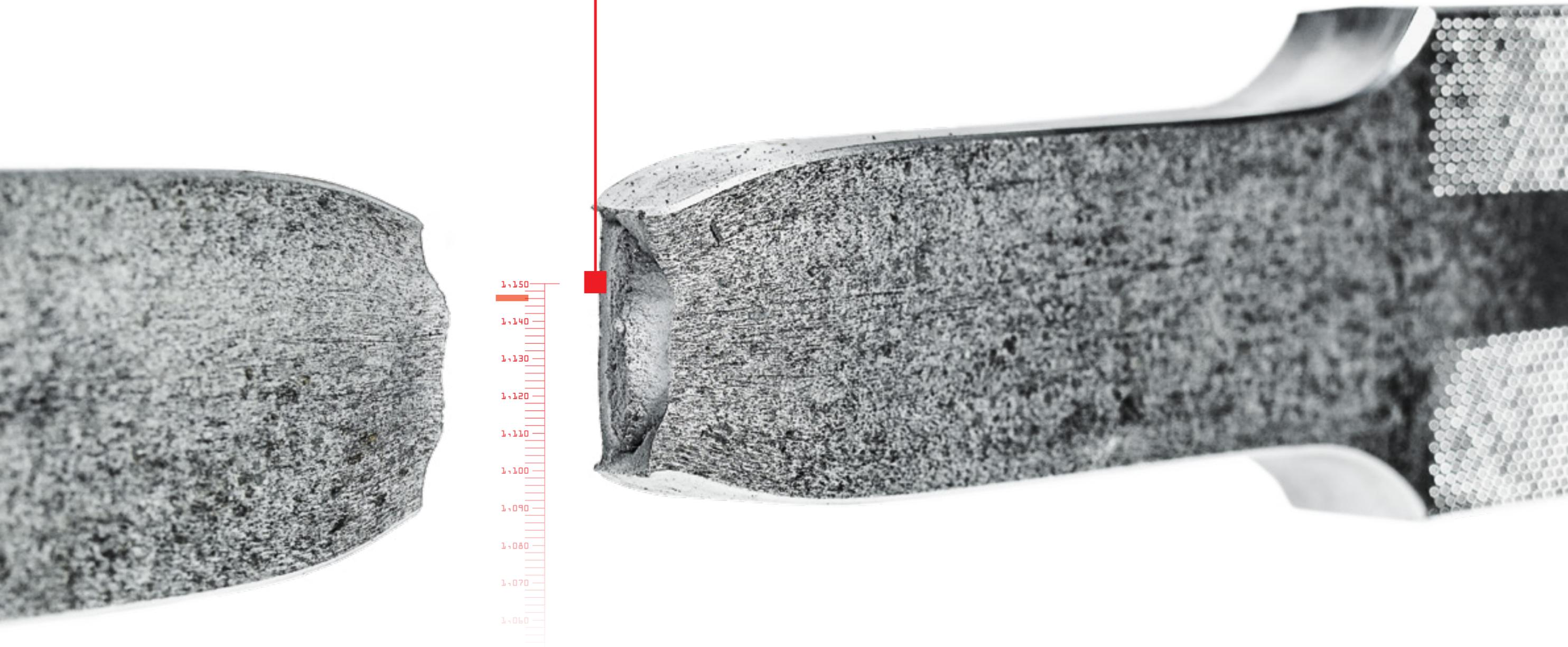
We ensure reliable test results:  
our machines, our software,  
and our services-customized for  
any application-make us a worldwide  
leader in innovation.

This allows us to support you in the  
ongoing development of your products  
and processes. Reliable and ready  
for the next generation of technology.

**Zwick / Roell**

1,146.54 kN

required force up to material break. The perfect interaction among system components allows us to achieve reliable test results. We develop and produce testing machines from 200 N to 5,000 kN. / Perfectly reliable. And perfectly accurate. /



RELIABLE TEST RESULTS

# TRACEABLE



0.050 ml

**volume of medicine for a function test.** Drop for drop: our test results are more than just accurate. They are transparent and traceable, due to continuous documentation of machine data, test parameters and user information. We meet the strictest standards and guidelines for every test. **/This is how we guarantee the highest level of reliability./**



# 18,000,000 cycles

**dynamic loading up to material fatigue.** Whether tensile, compression or flexure tests, function tests or standard tests, texture analysis or fatigue testing: with our 15 different product groups we support any test method imaginable. There is nothing we cannot test. And if the right testing machine for your requirements does not yet exist: we will build it for you. **/ Customized, and a safe investment. /**



TEST METHODS

Approx.

80,000,000

tests are performed by our machines annually. For over 160 years, our machines have been testing materials and components of all kinds. This level of experience is unique, and makes us a worldwide leading partner in materials and components testing in over 20 industries. /After all, experience builds reliability./

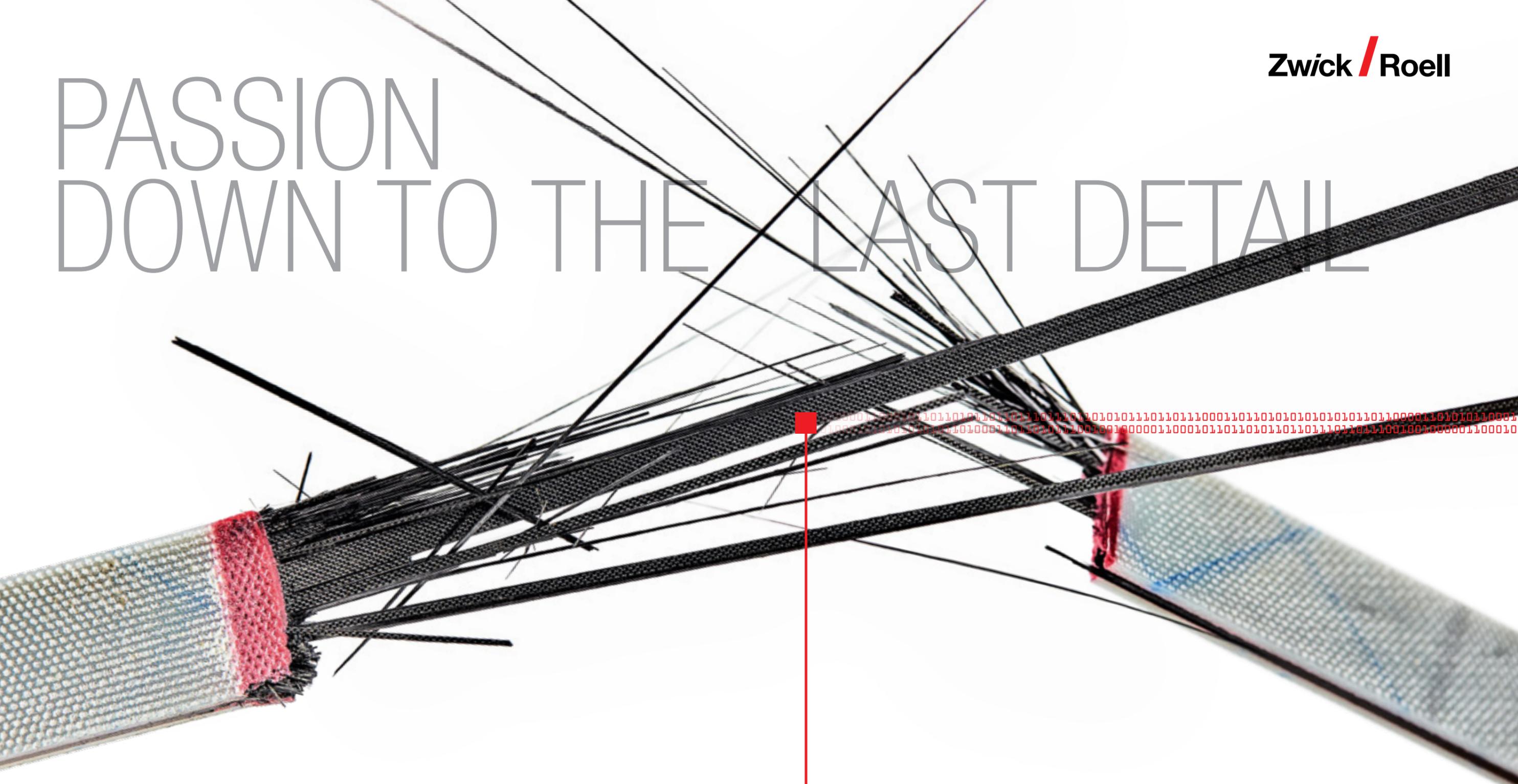


76 M  
77 M  
78 M  
79 M  
80 M

INDUSTRY EXPERIENCE

Intelligent Testing

# PASSION DOWN TO THE LAST DETAIL



187 experts

**in product development work on the perfect solution for you.** Our passion is precision down to the smallest detail. We search and find the optimal testing solution for every one of your requirements.  
**/For accurate, repeatable, reproducible and traceable test results./**

More than

18,201 standards

exist in the field of materials testing. But only one solution: the optimal solution for you! Our testing system is perfectly suited for your needs, in any industry. Based on our large portfolio we can advise you regardless of product. / You will always get what you need—not just what is already available. /

DIN 54190  
EN 571-1  
EN 10256  
EN 12504-2  
EN 13554  
DIN 45669  
ISO 13373  
EN 13018  
EN 13187  
DIN 54192  
EN 583

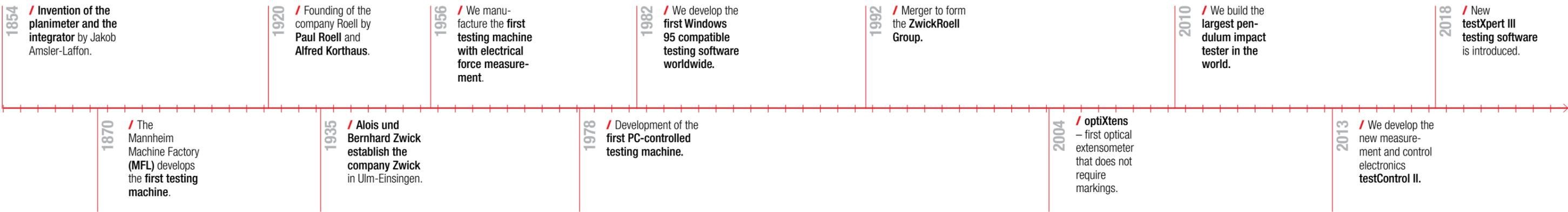
CUSTOM INNOVATION

ZwickRoell is your experienced partner  
in materials testing: you can depend  
on custom-fit solutions and reliable test  
results.

For over 160 years. And into the future.

This is ensured by our team of  
1,600 dedicated employees. With  
competence, openness and passion.

**Zwick / Roell**



# More than 160 years of innovation

/ Our company history dates back more than 160 years: since the mid-19th century, the names Amsler, Mohr & Federhaff, and Roell and Zwick have been inseparably associated with the materials testing industry. As a private company we always keep this tradition in mind and use it to drive us forward to continuous innovation.

In this industry, where there is no room for compromise in quality, reliability, or accuracy, we always have been, and will continue to be a leader in innovation.

We take great pride in our approximately 200 colleagues in development: they work endlessly on new and enhanced products that make your day in the lab easier – always maintaining focus on the reliability of test results.

# The ZwickRoell testing laboratory

/ Why are we a perfect partner in materials testing? The answers to that question can be found in our testing machines themselves: you can rigorously test our machines in the lab at our Ulm headquarters, or in one of our laboratories worldwide – of course using your own specimens.

More than 50 different testing systems are at your disposal in our main laboratory in Ulm alone. Our experienced testing engineers will actively support you during each test task.

Don't have time to visit one of our labs? No problem: you can have the tests performed via a live web demo to help you find the ideal machine to meet your requirements.



# Modular variety: the right solution for every requirement

/ Mechanical materials and components testing—this is our world and our passion. All of our products are developed and manufactured by the ZwickRoell Group. This guarantees perfect interaction among all components. And therefore reliable test results for you.

"Made by ZwickRoell" is more than just a commitment to quality; all of our products stand for intelligent testing, intuitive operation, and future security and reliability without compromise.



## Pendulum impact testers

You will find a wide range of pendulum impact testers for notched-specimen impact tests on plastics and metals. We provide standard-compliant testing to Charpy, Dynstat and Izod, as well as impact tensile-Method A/B from 5.5 to 750 joules.

## Hardness testing machines

Our product portfolio includes a full range offering for hardness testing of metals, plastics and rubber. Our hardness testing machines cover the entire bandwidth: from nano to macro.

## Extrusion plastometers

Our extrusion plastometers are used for reliable characterization of the flow properties of plastics. The demands on extrusion plastometers vary according to the processing stage in the plastics industry. We offer the perfect testing instrument for every testing volume.

## Static materials testing machines

Our static materials testing machines are specifically designed for tensile, compression and flexure tests, as well as shear and torsion tests. They are ideal for standard tests as well as complex tasks in the areas of materials and components testing.

- / Universal testing machines to 250 kN
- / Time and creep test machines
- / Torsion testing machines
- / Biaxial testing machines
- / Testing machines for sheet metal forming

## Dynamic and fatigue testing systems

We use various physical drive principles for our dynamic testing machines. Each method has its own advantages and specific application ranges. This allows us to find the right solution for every one of your specifications.

- / Servohydraulic testing machines
- / Vibrophores
- / High speed testing machines
- / Linear motor testing machine
- / Electromechanical servo-testing actuator

## Automated testing systems

Our automated testing systems support and simplify many tests: with our modular system for robotic testing systems we can perform the necessary tests efficiently and reproducibly. We offer automated testing systems that are perfectly matched to your application – from compact systems for simple tests, to collaborating robots, and large-scale systems for complex test tasks.

## Drop weight testers

Our drop weight testers are ideal for testing of plastics and composites, as well as metals testing. The Amsler HIT series drop weight testers range from 230 to 2,000 joules, and the high-energy drop weight testers for metals testing go up to 120,000 joules.

## High capacity testing machines up to 5,000 kN

For tensile, compression and flexure tests in the high capacity range we offer testing machines with different drive technologies. This allows us to provide the perfect solution for your particular application.



## Quality from a single source

/ To us quality means: we meet all of your requirements. Without if or but. Regardless of complexity. We are able to achieve this with our flexible and well-designed machines and with our quality standard "Made by ZwickRoell." Our uncompromisable high standards are substantiated by our certifications.

We develop and manufacture all materials testing machines ourselves at our own production facilities. This includes mechanic, electronic and software components as well as the wide range of accessories. By doing this we are able to optimally match our machines and components to each other and meet our quality standards. It also allows us to provide the highest possible level of customer support—an additional benefit for you.

As we look to the future, we want to continue being a leader in innovation. And therefore, we are always investing: in our production systems, in our infrastructure, in our employees and in our processes.

# ZwickRoell's global presence

/ We are at home all over the world: as one of the world's leading suppliers of materials testing systems, we are represented by subsidiaries and sales partners on all continents. This provides our customers with excellent local service and personal consulting in over 56 countries.

With regular training courses and continuing education we ensure that our employees are always up to date on the newest developments – whether it be in Europe, Asia or the Americas.

Zwick | Roell

forty  
three

Sales and  
service partners

347

Sales and  
service employees

28.000

Service jobs in the year



### Consulting and application technology

Before you buy a machine our experts are there to advise you—in person and in detail. This allows you to find the optimal testing solution.



### ZwickRoell Academy

Your employees receive diligent training—on both software and applications. This will properly prepare them for their daily tasks.



### Maintenance and inspection

Our regular maintenance and inspection services protect your machine from downtime and unnecessary costs associated with repair work.



### Calibration

We operate calibration laboratories around the world. Among other standards, we perform calibrations to DAkkS, COFRAC, UKAS, A2LA, INMETRO, TÜRKAK, NABL, etc.



### Software services

Our experienced software engineers develop custom solutions for every task and every requirement.



# Service is our passion

### Online services

We work continuously on the development of our digital services. From system monitoring to web demos, we support you digitally.



/ We support you from every angle: we not only meet the widest range of test requirements, but we support you throughout the entire life-cycle of the testing system with tailored support services-anywhere in the world.

For our materials testing machines we guarantee the availability of replacement parts for at least 10 years after a product has been discontinued. In short: when you choose us, you choose absolute investment security.

### Modernization

Testing systems from different manufacturers can be transformed into state-of-the-art equipment using modern measurement and control electronics, drive technology, and testXpert III testing software.



### Machine removal and relocation

Are you moving? No problem: we will take care of the complete move of your testing machine or laboratory—from planning all the way to recalibration.



### Materials/components testing laboratory

In our laboratory we also perform project-related and contract testing. There are over 50 testing machines at your disposal.



### Repairs and spare parts

We think and act for the longterm: this is why we guarantee the availability of spare parts for at least 10 years after a product has been discontinued.



### Hotline and customer support

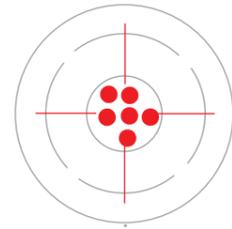
Do you have questions or need support? Our service engineers are always there for you: we help you quickly and competently-whether it is regarding your testing machine or your testing software.



# Modular innovation

A fundamental requirement for reliable test results in materials and components testing is the perfect interaction among all testing machine components. This is why we develop and manufacture everything ourselves: including the load frames and all main components.

With our proven standard components we build a custom testing system that perfectly meets your requirements.



- Accurate
  - Repeatable
  - Reproducible
  - Traceable
- Reliable test results**

## Extensometer

Our extension measuring systems are unbeatably accurate, regardless of whether you decide on a contact or non-contact system. For any application, we offer ergonomic systems (extensometers) that reduce operator influence.



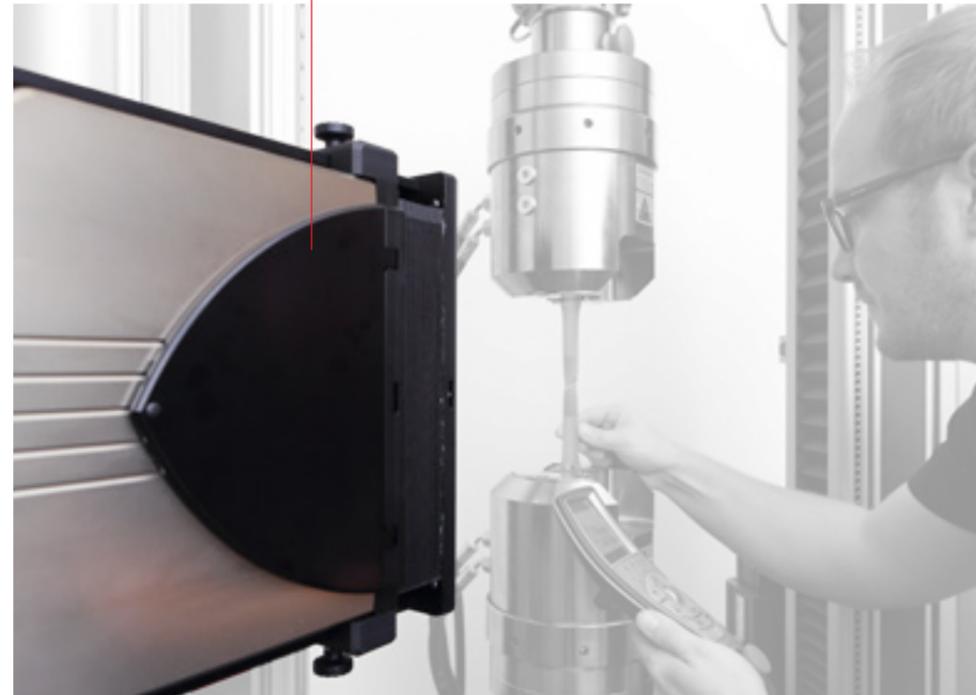
## Load cell

The advantages of our patented Xforce load cells are clear: they are extremely robust, and extremely accurate. They meet all five accuracy class criteria to ISO 7500-1 in a very wide measurement range.



## Measurement and control electronics

testControl II is the heart of every testing machine, and has been for many years. Our sophisticated control electronics combine reliability and flexibility with optimum ease of use.



## Specimen grips and test tools

For exact measurements, specimens must be securely held in the specimen grip. To meet this requirement we offer reliable systems for any application. With us you will find the ideal test tools for compression, flexure and components testing.



## Testing software

Intuitive, intelligent, and workflow oriented: our testXpert testing software was developed specifically for materials testing, and continues to be groundbreaking. With over 35,000 installations worldwide it is the market leader in the industry.



## The WE at ZwickRoell

/"We are open-minded and passionate about what we do!"

An uncommon company slogan? Maybe. But we have lived by these words for over 160 years. "We" means our more than 1,600 employees that make up the ZwickRoell Group worldwide, with over 1,000 of them at the Ulm headquarters. Many have been loyal employees for decades. We attribute our success to their knowledge, ability and commitment. The work we do is characterized by the open cooperation among all teams, and the resulting commitment to our customers.

Skilled employees are our most valuable asset, and we highly encourage their personal and professional development. And from that we all profit—our employees, the company and you. One of our highlights is Learning Week: employees have the opportunity to participate in more than 100 classes and training courses over 6 days.

We are a family-owned company.  
**We are ZwickRoell.**





# Commitment to sustainability

/ As a future-oriented company, sustainable thinking and acting are of fundamental significance. We want our economic success to be in harmony with environmental protection and our social responsibility. Since 2014, we have been the first testing machine manufacturer with CO<sub>2</sub>-neutral production.

To fulfill our commitments we get support from both our employees and our customers. With the annual running challenge ZwickRoell Runs the World, participants run a determined number of kilometers in 60 days. Depending on the result, we make a financial donation to social organizations around the world which are meaningful to our employees and customers.

In addition, we support various national and international social and sustainability initiatives.

- / ZwickRoell Academy for underprivileged youth in Chennai (India)
- / Sponsorship for the children's hospice in Bad Grönenbach
- / Charity volunteer program for our trainees and students
- / Sustainable resource management through an innovative modernization concept
- / Etc.

For more about our social commitment, go to: [www.zwickroell.com/csr](http://www.zwickroell.com/csr)



We are a global leader in materials testing and your trusted partner for reliable test results. We are determined to continue investing in innovative machines, software and customer service.

Zwick / Roell

**Zwick / Roell**

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