

## Modernization Packages for Static and Dynamic Testing Machines - For Over 50 Manufacturers

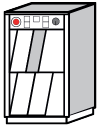
We reserve the right to make technical changes in the course of ongoing development.

All data at ambient temperature.

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## Why work with ZwickRoell to modernize your testing machine?



### Are your measurement and control electronics more than 10 years old?

- As the core of your materials testing machine, the measurement and control electronics are of critical importance. If this part of your system is outdated, your machine is subject to longer downtimes due to limited spare parts availability.



### Are you working with an outdated operating system or have your sights set on testXpert III?

- Aged testing software limits the flexibility of a testing machine and the benefits from ongoing developments in measurement and control technology. Outdated software versions are often no longer compatible with current Microsoft operating systems, which can result in connection errors and loss of data.
- The use of operating systems such as Windows XP, Windows Vista or Windows 7 poses serious security risks stemming from the lack of security updates and bug fixes.



Safety

### Is your testing machine still safe for your operators?

- There should be no compromises when it comes to the operational safety of testing systems. Through a modernization you can recover full operational safety as required by the current EC Machinery Directive and the German Ordinance on Industrial Safety and Health.



### Is your system properly equipped for challenging test tasks according to the latest test standards?

- Your test tasks grow as you grow. A modernization returns your machine to state-of-the-art condition. Modern extensometers and load cells allow you to take on new testing challenges.



### Does your company operate with an environmental policy?

- A modernization supports you in protecting the environment and other valuable resources.

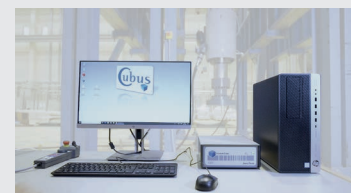
## ZwickRoell modernizes materials testing machines regardless of the manufacturer:



- Electromechanical testing machines for static applications

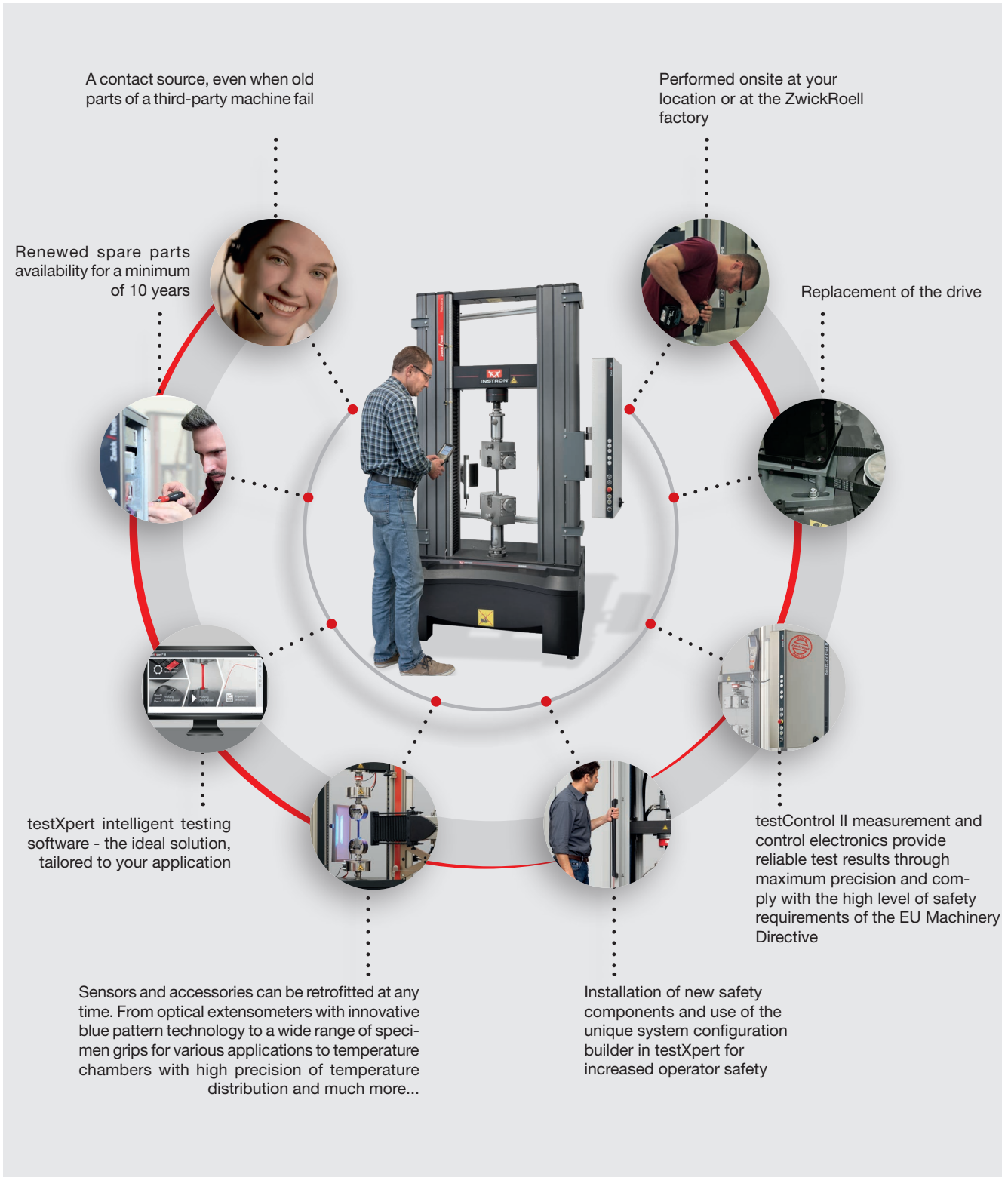


- Servohydraulic machines and Vibrophores for dynamic testing applications



- Multi-axial dynamic testing systems

## What does the modernization of a static testing machine at ZwickRoell include?



## The right modernization solution for every dynamic application:

### testControl II digital measurement and control electronics for uniaxial servohydraulic testing machines

- Scope of delivery based on your needs: From basic substitution of the electronics to a complete solution involving the replacement and modification of the hydraulic components
- testXpert Research and testControl II: From an intuitive block program for flexible design of your test sequences to a test program compliant with common standards, such as low cycle fatigue tests to ASTM E606 or fracture mechanics tests to ASTM E399, ASTM E647 and ASTM E561.

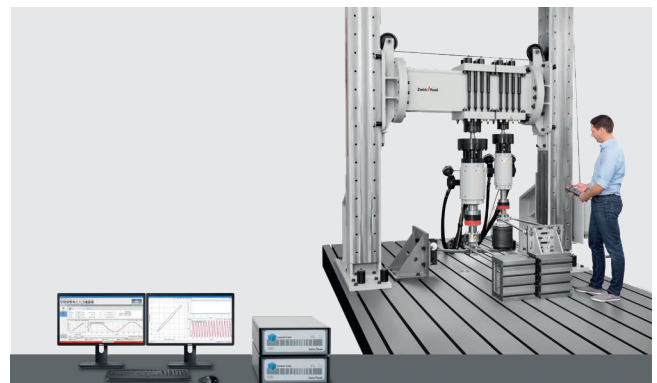


### Digital testControl II measurement and control electronics for Vibrophores

- Replacement of the static drive for precise mean force control
- Use of the new testControl II measurement and control electronics
- testXpert Research software for fatigue tests under constant load
- High-quality remote control with integrated display for operating convenience when setting up the PC outside of a sound insulating enclosure

### Control Cube servo controller for multiaxial and complex servohydraulic testing systems

- Scope of delivery based on your needs: From basic substitution of the electronics to a complete solution involving the replacement and modification of the hydraulic components
- Extremely flexible and user-friendly solution for frequently changing test arrangements
- Optimally suited for the simulation of actual determined operating loads
- Operator-friendly Cubus testing software that can be adapted to your specific test requirements through optional plug-ins



### After Sales division – your experienced contact source for modernizations, retrofits and software services

As part of our commitment to long-term reliable service and upgradeability of your testing system, we offer:

- Modernizations of testing systems from any manufacturer,

- A modular ZwickRoell accessories portfolio, including specimen grips, extensometers and load cells—even for your modernized third-party machine,
- Software services, such as updates, upgrades and database connections.

Make the switch to state-of-the-art testing technology and system security for reliable test results. **We look forward to talking with you!**