

Spring rigidity test

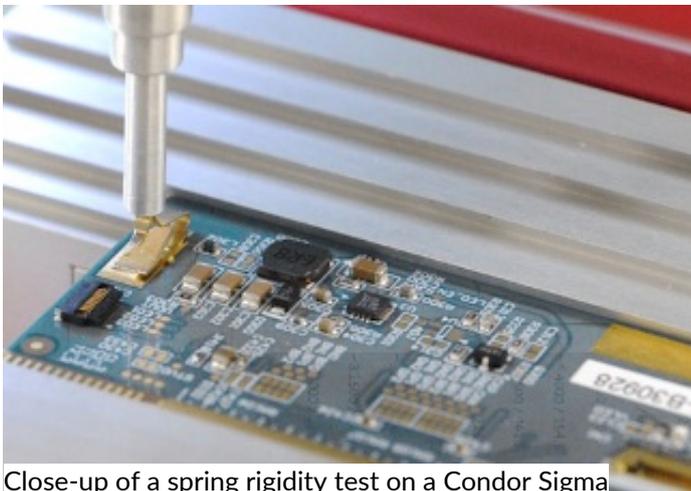
Spring rigidity test

- Fast and easy operation
- Multiple force ranges
- High repeat frequency
- Auxiliary inputs to plot electrical characteristics against mechanical input
- All XYZTEC sensors work in two directions

[Video not included in PDF: [click here to view online](#)]

Spring rigidity test

There are many types of electrical spring contact, for example sliding contacts like those in connectors and switches and surface pressure contacts such as battery terminals and power distribution. The size, contact force, number of contact cycles and materials used varying depending on the application.



Close-up of a spring rigidity test on a Condor Sigma

The performance of such contacts depends on characteristics like stiffness, deformation, material, moving mass and geometry. This can be analysed simply with the application of Hooke's law, or more complexly where dynamic effects such as the contacts sliding friction,

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- Germany
- Taiwan
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- United Kingdom
- USA: California
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Bond testers

- Condor *Sigma*
- Condor *Sigma Lite*
- Condor *Sigma W12*
- Condor *150HF*

This is page 1/4
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force profile, damping constant or clamp force are investigated against time and distance.

For example material properties like Young's modulus might be measured:

$$E = \frac{F_x \cdot l_0}{A \cdot \Delta l}$$

XYZTEC have many tests that can investigate and measure the static, dynamic and life performance of your spring contacts with contact forces from a few grams force up to hundreds of kilograms. In cases like button switches and circuit breakers a push-pull test can evaluate force versus time and distance as single or multiple events.



Our test platforms have auxiliary inputs for external sensors, which can be very useful during spring rigidity testing

Full control over test parameters

Our software offers full control over the test parameters including force, speed, distance and number of repeats. Data output can be in both numerical and graphical form, allowing full and varied analysis. The analysis can be performed either within the XYZTEC software or externally, using our comprehensive data exporting capability.

Auxiliary inputs and outputs

Our test platforms have auxiliary inputs for external sensors that might, for example, measure a failure of some kind that stops the test and records the number of cycles to the event.

Auxiliary inputs enable in-situ testing to measure contact properties such as resistance in real time and synchronously with mechanical inputs of position and force.

Contact us

Did we catch your attention? Please [contact us](#) for more information or to request a demonstration or a quotation.

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Relevant products

- Condor Sigma
- Condor Sigma Lite
- Condor Sigma W12
- Condor 150HF
- Revolving Measurement Unit
- Sensors
- Tweezers
- Vision
- Software
- Calibration
- Work holders

Increase your bondtesting throughput

The **Condor Sigma** is not only the most accurate bondtester in the world, but also the fastest. [Click here to read the study that proves the Condor Sigma is up to 39% faster than the competition.](#)

Special applications

Please [contact us](#) if you have any questions or special bond testing requirements.

Condor Sigma brochure

[Click here](#) to download the **Condor Sigma brochure**, the **Condor Sigma W12 brochure** or the **Condor Sigma Lite brochure** or the **Condor Sigma Vision brochure (PDF)**.

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