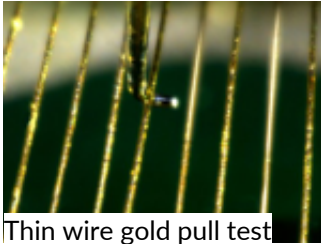




Wire pull test



Thin wire gold pull test

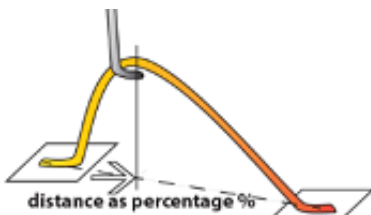
- Sensor accuracy $\pm 0.075\%$
- Rotational accuracy $\pm 0.05^\circ$
- Complies with industry standards
- Destructive and non-destructive testing
- Pull angle modeling is also available with DVS2811 software
- External standard MIL-STD-883 (Methods **2011.9** for destructive testing and **2023.7** for non-destructive)
- Possible to combine with **loop height test**
- **Automatic wire detect functionality**

How to: Wire Pull

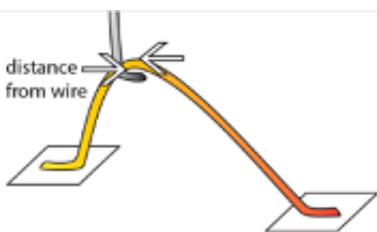
We have added an **extensive how-to on Wire Pull** to our website. By doing this we aim to spread knowledge about bond testing in the industry. [Click here to go to www.wirepull.how](http://www.wirepull.how).

Thin wire

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



Program where to pull the wire between the first and second bonds



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Bond testers

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 - Condor *Sigma W12*
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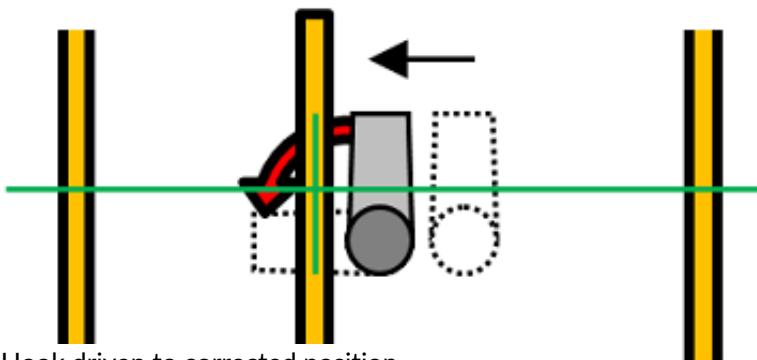
Program the distance from the wire to position the hook during automation

Wire Pull Testing applies an upward force under the wire, effectively pulling it away from the substrate. There are many types of pull tests, therefore XYZTEC offers a solution for each type. The pull test can be performed on wires or ribbons. The material of the wires or ribbons is mostly gold, aluminium or copper.

Majority of tests on wirebonds are performed with a 90° hook that is positioned under the wire. The Z-stage then moves up and the wire is pulled. The alignment of the hook under the wire is very important to obtain reproducible measurements. This can be ensured using our semi-automatic or fully automatic testing compliant with DVS2811.

Thick wire

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



Hook driven to corrected position

Automatic wire detect

As more and more companies are making the transition to **automatic** wire pull testing, the engineers are also finding out its limitations. On many products, the placement of wires is not consistent and simple automation programs will miss the wire or pull two wires at once.

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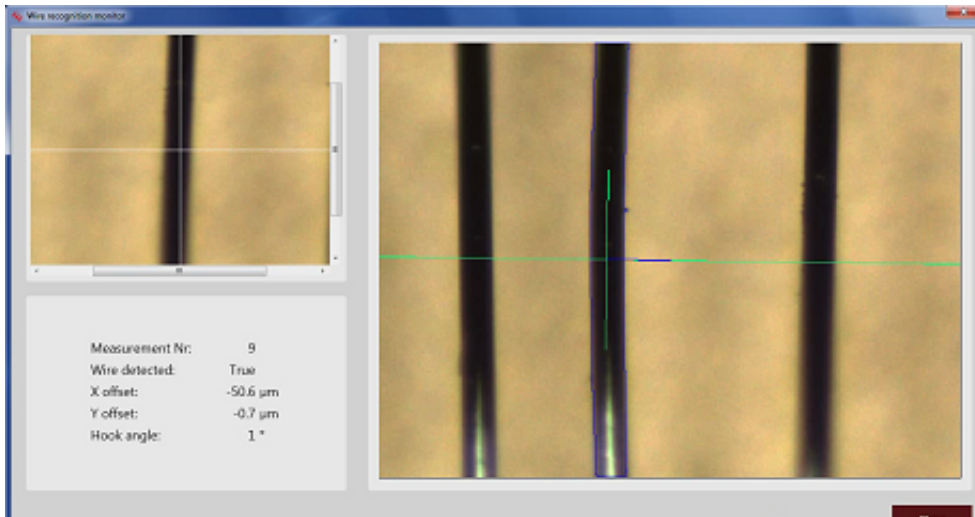
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Bond testers

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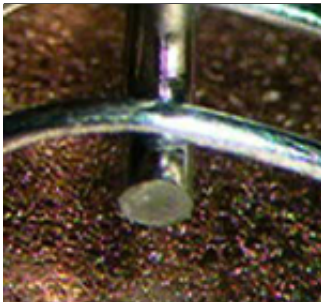


Measurement Nr:	9
Wire detected:	True
X offset:	-50.6 µm
Y offset:	-0.7 µm
Hook angle:	1 °

Wire detect on Condor Sigma; wire detected at 50µm offset from the expected position

XYZTEC's **Condor Sigma** is the only bond tester in the world to overcome this problem with its **automatic wire detect functionality**.

The illustration shows how the hook is driven to a corrected position, after the wire was detected at the position of the green crosshairs. Thereafter, when the bond tester performs the pull test, it does not miss the wire but pull it in exactly the same position as every other wire. This enables a higher degree of consistency than possible when doing manual tests.



Thick wire aluminium pull test

See also: **ribbon pull** and **vector pull**.

Contact us

Did we catch your attention? Please **contact us** for more information, to request a demonstration or a quotation.

Relevant products

- **Condor Sigma**
- **Condor Sigma Lite**
- **Condor Sigma W12**

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- 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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